HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

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HOSPITAL ABSTRACTS

Vol. 16 August 1976 No. 8

HOSPITALS IN GENERAL

1079. BÖSEL, K. **Die Auswirkungen der Nutzungsoptimierung auf die Krankenhausorganisation. [The effects of optimum use on hospital organization.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, April, vol. 17, no. 4, pp. 203-212, 215-220.

To ensure that hospital facilities are used efficiently, and especially to avoid unnecessary occupation of acute beds, it is proposed that hospitals should develop into 'integrated health centres' (IHCs). After preliminary diagnosis and/or treatment has been carried out by the general practitioner (or specialist practising outside the hospital) the patient is admitted to the IHC where according to his need he is allocated to 'full' or 'semi' in-patient care. 'Full in-patient care' may be either intensive, normal or long-stay. 'Semi in-patient care' includes the following concepts: minimal or 'hostel' care, where the patient largely looks after himself, takes his meals in a dining room, goes to see the doctor rather than the doctor coming to him, and even collects his own medicines; day hospital or night hospital care; and 'short-stay care' for patients who need to be looked after for a few hours after certain diagnostic procedures and minor operations. For the care of discharged patients the IHC would collaborate closely with general practitioners, home nursing and home care services, home helps and other welfare bodies. The transformation of hospitals into IHCs could only take place gradually and slowly. The first step would be to group patients according to the degree of care needed; the next would be to develop the various phases of 'semi in-patient care'.

1080. TODD, J. W. **World of medicine: good and bad hospitals.** *Update*, London, 1976, April 15, vol. 12, no. 8, pp. 863-864, 866, 868, 870.

In both lay and medical circles it is often said that one hospital is good while another is bad. Such generalizations are absurd, but a number of individual factors about hospitals which lead to hospitals being called good or bad are considered, including technical expertise, facilities, food, building and decor, size, communication with patients and communications with general practitioners and other hospitals. It is concluded that very few valid generalizations can be made about hospitals. There are no good and bad hospitals—only good and bad staff of all kinds. Even when we consider features, such as food, which are likely to be similar throughout a hospital, individual patients rate them differently. One generalization can be made—hospitals are bad in communicating with general practitioners and other hospitals, but even here exceptions must be made.

HOSPITALS IN GREAT BRITAIN

1081. MERRINGTON, W. R. **University College Hospital and its Medical School: a history.** London, Heinemann, 1976, xviii, 302pp. £7.50

Lectures on medical subjects were given at the University of London from its

inauguration in 1828. Although a university dispensary was opened in the same year, it was not until 1834 that a teaching hospital was established as the North London Hospital, to be renamed University College Hospital in 1837. This history is largely concerned with the people who have contributed to the development of the hospital and medical school up to the present day. Twenty-nine photographs are included.

HOSPITALS IN OTHER COUNTRIES

1082. WALLACE, J. D. **Hospitals and new perspectives in health care.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. 18, 20, 23-24.

Reports on proposed developments of the Canadian health care system have repeatedly stressed the faults of the existing system without offering any practical alternatives. It is now suggested that hospitals should play a greater role in the system to strengthen the weaknesses. The two separate health care systems of 'public health' and diagnosis and treatment of illnesses should be more closely linked; the hospital should provide more comprehensive services on an ambulatory care basis, co-ordinating the activities of all medical staff under the heading 'community medicine'. The 11 separate health insurance schemes for the federal government and each of the 10 provincial governments allow each province to develop its own health schemes, however much time and money has been wasted as a result of this fragmentation. Plans must be more co-ordinated in order to be effective. Hospitals could develop multidisciplinary committees and pass the information to the Canadian Hospital Association to act as a central information agency. Improved interorganizational co-operation can best be developed by the hospitals themselves. Regionalization of community care will only be solved when the provinces are convinced that the people who can devise the best community scheme are those who live in the area. The changes that will occur in health care could, if planned correctly, enhance the role of the hospital as central provider of community care. Consequently a positive approach is needed from all.

1083. TIMMERMANS, I. Vormen van dienstbetoon in Academisch Ziekenhuis Leiden. **[Types of service rendered in the Leiden Teaching Hospital.]** *Instelling-Management*, Den Haag, 1976, April 27, no. 4, pp. 11-16.

After briefly relating the hospital's history since its foundation in 1636, this paper discusses aspects of its finance, structural organization, administration and services. The total income of the 869-bed hospital for 1975 was Fl.162 million (appr. £34.5 million) including a State subsidy of Fl.72 million (appr. £15.5 million) which will become Fl.56 million (appr. £12 million) for 1976. The hospital employs 3,200 people, has one board and one general director under whom are three directors, for health care (medicine and nursing), teaching, and general matters which include technical, catering, commercial, administrative and other services. The central administration employs 50 people of whom 30 are concerned with patients' administration and 20 with finance. The information centre is being enlarged with a computer service. The linen service employs 20 staff and takes care of the sewing rooms and the laundry which is sent out (1,200,000 kg. yearly). Other features are services for repair and upholstery, carpentry, painting, fire services, and two emergency generators plus an emergency battery for theatre lighting. The kitchen, recently remodernized, has a 12 m. 'street' with cooking

apparatus on both sides and a large dishwashing installation which has replaced the previous decentralized method. Cleaning services, except for the kitchen, are carried out by an outside firm. Refuse collection, at present from five 1,100 kg. containers, still has some unsolved volume problems. The paper includes 14 pictures and one diagram.

1084. Das Hanusch-Krankenhaus. **[Hanusch Hospital, Vienna.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, April, vol. 17, no. 4, pp. 185-189.

During the past 10 years the Hanusch Hospital (named in honour of the first Minister for Social Affairs of the Republic of Austria) has undergone extensive enlargement and modernization. It now has 672 beds and the following facilities: anaesthesia department; clinical laboratory; institute for nuclear medicine; X-ray department; pathology institute; institute of physical medicine; pharmacy; and a large number of specialist out-patient clinics. The urology department has a dialysis unit with eight places. A new central kitchen provides individually portioned meals on heated trays which are transported to wards on special trolleys. The hospital now has its own emergency generators which can supply the electricity needed to keep all hospital services going normally.

1085. SIMMS, S. **Hong Kong's new hospital.** *Health and Social Service Journal*, London, 1976, May 8, vol. 86, no. 4489, pp. 842-843.

The 1,340-bed Princess Margaret Hospital, Kowloon, is Hong Kong's newest hospital. It stands in 27 acres on a promontory. The 4.3 million population is now served by 19 government hospitals, 19 government-assisted hospitals and 11 private hospitals, which together provide 17,850 beds. Two features of the Princess Margaret Hospital are: a theatre service centre providing sterile pre-set trays containing instruments for use in any operation; and the geriatric unit, the first of its kind in a government hospital in Hong Kong. The geriatric unit has been established as a pilot scheme; at present there are 74 beds in use but it is expected that all 222 will be filled. The criteria for selection is that patients must have a chance of recovery and will only need to occupy a bed for up to a month. Once patients are discharged they are encouraged to return as day patients and receive physiotherapy and occupational therapy. At present only the infectious diseases department, the geriatric unit and the obstetrics department are operational, but these will soon be joined by the medical, surgery, paediatrics and orthopaedics departments. Most of these will be housed in the main block, but the infectious diseases and geriatric departments are in the special block. The casualty department is housed in a third, inter-connecting building. Work has also begun on a 1,304-bed psychiatric hospital on an adjacent site.

PLANNING, DESIGN AND CONSTRUCTION

See also Abstract No. 1135

1086. ALLEN, R. W. and KÁROLYI, I. **Hospital planning handbook.** New York & London, Wiley, 1976, xiv, 242pp. £8.50

This book is intended to help the busy professional to avoid some of the muddle that typically surrounds the preparation of a programme for hospital construction—what is sometimes called 'the brief to the architect'. Design factors are dealt with only in passing. Certain areas which are particularly difficult or sensitive are dealt with more

fully. These include: out-patient services; nursing services; diagnostic and treatment services; supply services; administrative and general services; and housekeeping, maintenance, and engineering services and systems. Plans and tables are included.

1087. EICHHORN, S. Systemplanung im Krankenhauswesen und Krankenhausbetrieb. **[System planning in hospital organization and management.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, Jan., vol. 17, no. 1, pp. 35-38, 41-44; Feb., vol. 17, no. 2, pp. 90-92, 95-98, 101-103.

The author discusses in detail the principles of planning (planning being defined as 'the design of a system in accordance with which certain processes should be carried out') as applied to hospital services and hospital management. The various factors involved are set out under the three phases of planning: preparation for building; construction and commissioning; and day to day management.

1088. FALICK, J., BURDICK, D. and WINKELMAN, H. **Planning can't replace money but . . .** *Modern Healthcare*, Chicago, 1976, April, vol. 5, no. 4, pp. 53-55.

This paper presents an organization chart for the planning process which takes the planning consultants out of the direct decision-making line. Committees of the hospital board, administration and staff make the choices and grapple with the problems. The consultants staff those committees, present options, instruct on the process, provide technical expertise and consult. The innovative part of this organization is the medical facilities planning review committee, consisting of leaders of the medical, administrative and nursing staff. It has four to 10 members—always enough to assign one member as liaison to one of the departmental planning committees, which are appointed by each department. A game has been developed to teach staff about physical planning. Some of the lessons learned are mentioned briefly.

HOSPITAL DESIGN

See also Abstract Nos. 1086, 1155

1089. HARDY, O. B., LAMMERS, L. P. and MINKALIS, C. A. **Build less total space but achieve more usable space.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 105-108.

Design efficiency can reduce the construction costs of many hospitals by 10 per cent or more through the production of a high ratio of net usable area to total gross area. Eighty-five hospitals were examined for usable to gross area ratios within the rating 75 to 150 beds, 151 to 250 beds, 251 to 350 beds and 351 to 551 beds. The basic guidelines for a high ratio of net usable area are: (i) a square floor plan has the least amount of wall space per square foot of floor space, which should preclude the use of long rectangular configurations in most internal and overall designs; (ii) the ratio of floor area to linear feet of wall space increases as floor area decreases, thus it is important to consider the adverse implications of small separate structures and inflexible spaces; (iii) single-loaded corridors result in twice the ratio of corridor space to double-loaded corridors; (iv) corridors should provide the deepest net usable space functionally feasible on both sides; (v) short spaces and small bays increase mechanical space and reduce the net area; (vi) approximately one-third of the gross area in a hospital is

provided in bed areas and the ratio of net assignable area is greater when more beds are provided per floor; (vii) design flexibility is reduced by constricted sites; (viii) multiple buildings needing connecting walks reduce the net area considerably; and (ix) the construction area is reduced by the provision of small and unusable spaces. To achieve a high ratio of net usable area merits more attention to planning throughout the design process.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

1090. MOUNTZ, W. and FALICK, J. **New facility emphasizes efficient care, positive image.** *Hospitals*, Chicago, 1976, Feb. 16, vol. 50, no. 4, pp. 57-60.

The Norton Children's Hospital, Memorial Infirmary and Psychiatric Clinic are housed together in the Louisville (Ky.) Medical Center. The ground, or medical service, level extends under the parking garage; the street and bridge levels are accessible to pedestrians; the third level accommodates Children's Hospital in-patients; the fourth and fifth Memorial Infirmary; and the sixth the Psychiatric Clinic. The day-to-day flexible design creating a 'hospital per floor' system, the result of specific ideas about better patient care expressed by the nursing staff, allows each 144-bed floor to be divided into sub-units of eight, 10 or 16 private rooms if required. Inside each unit the rooms surround a central control area. Each floor is administered from a central communication station by two or three nurse co-ordinators, responsible for patient care, and a unit manager, who maintains all support services. Nurses are thus freed from non-nursing functions, one nurse and one aide being responsible for each sub-unit. The medical service level links out-patient services to emergency and radiology services adjoining the acute care services, thus eliminating duplication of costly services and equipment. Other community health facilities include a self-contained burns unit with a viewing gallery with an intercom system for visitors to patients in isolation, and the Bingham Child Guidance Clinic. The paper includes three photographs and a nursing floor plan.

1091. **Facility ensures comfort, maintains dignity of patients, staff, and visitors.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 19-20, 22.

Presbyterian Hospital, Oklahoma City, Okla., has been re-sited on the campus of Oklahoma Health Center. The building site and its 2½-acre lake cover a 24-acre area of land at the north-western area of the campus. The hospital has been expanded from 195 beds to 400 beds and consists of two buildings—a three-storey administrative and diagnostic building and a seven-storey nursing tower. The administrative and diagnostic building contains a 13-room surgical suite, large laboratory, radiology suite, eight-bed cardiac care unit and two eight-bed medical-surgical intensive care units. The admissions office has four separate interview rooms. Also included in the building are the chapel, cafeteria and restaurant, pharmacy, library, medical records department, and out-patient and emergency departments. The exterior of the building has five stair wells that provide a contrast to the predominantly horizontal planes of the building. The facade is composed of light brown concrete in five-inch thick panels, with a texture of vertically grooved flutings of various colours. The nursing tower is connected to the administrative block by passages and three connecting towers. All patient rooms are private. Each floor contains two 32-bed units. There are also large yet private family rooms used for counselling, and dayrooms for the patients.

1092. Das neue Kreiskrankenhaus in Mühlacker/Enzkreis. **[New district hospital in Mühlacker/Enzkreis.]** *Krankenhaus*, Stuttgart, 1976, April, vol. 68, no. 4, pp. 124-135.

The new 326-bed hospital (architects: Köhler, Kässens, Schanty and Wolf, Frankfurt on Main) at Mühlacker (in the Enz district of Baden-Württemberg) came into use in October 1975. The T-shaped four-storey ward block adjoins the administration, diagnosis and treatment block which has two floors. Each of the four ward floors has four nursing groups of 20 beds grouped round a traffic core. Patients' rooms are designed for two beds though for private patients they have only one bed: there are also a few four-bed rooms. Details are given of the technical installations which include a pneumatic tube system, a central call system, and emergency generators. The paper includes a site plan, floor plans of treatment areas and a typical ward floor, and seven photographs.

DESIGN OF SPECIAL DEPARTMENTS

See also Abstract No. 1198 (Haemodialysis)

1093. KEESEE, M. A. **Central sterile work core adds space, reduces contamination.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 119-120, 124, 126-127.

Traditional designs of dead-end sterile operating theatres and sub-sterile work areas are being replaced with a grouping of sterile operating theatres that open onto a central sterile work core, served by peripheral sub-sterile corridors. The Medical Center Hospital, Odessa, Texas, has begun a comprehensive renovation and expansion scheme. Guidelines for the development of the sterile area are: (i) the cost is directly proportional to the area to be treated when creating nearly sterile conditions in a large room; (ii) a totally clean environment becomes increasingly difficult to maintain once human beings are introduced; and (iii) air re-circulated through the existing air-conditioning systems is cleaner in many areas than the air that can be obtained from outside the system. Directional flow of traffic appears to be one solution to reduce the danger of cross-contamination. Correct use of the circulation pattern is the key to the central sterile work corridor design. The size and construction of the new surgical suite is outlined. The advantage of the central sterile corridor design is the use of many multipurpose rooms and the reduction of staff movements. Problems can arise through the need to maintain equipment within the operating theatres in which they are located and through the process of transferring laboratory specimens for testing. The sterile core concept is a solution to the need for greater work space, stricter contamination control and the control of movement of staff and material. A plan is included.

DESIGN OF SPECIAL HOSPITALS OR UNITS

See Abstract No. 1219 (Psychiatry)

WARDS AND PATIENTS' ROOMS

1094. ISAACMAN, T. **The patient arena: a ward by any other name.** *Modern Healthcare*, Chicago, 1976, March, vol. 5, no. 3, pp. 29-32.

Reassessment of hospital wards, patient rooms and designs has led to a movement

away from the 20 to 40-bed open wards. A review of the single patient room reveals several advantages: a readily achieved high level of occupancy; elimination of costly patient transfers; reduction of the problems of patient incompatibility; and privacy for the patient. However space and high construction costs result in small areas, psychological problems and isolation. A new theory of the 'patient arena' has been developed and is defined as a 'mega-bedroom which comprises the total nursing unit' using the single room and the ward principles. It covers an area of 10,000 to 12,000 sq. feet which includes the nurses' areas, support areas and corridor spaces. The ward area is barrier free with no doors separating the beds from the surrounding areas. The patient could be raised up and be able to watch everything happening in the ward. A less than full height subpartition would separate each bed, providing privacy when the patient reclined, but low enough for him to see when in the head raised position. These partitions offer designers an opportunity to create a cheerful scheme whilst also acting as part of the basic air-flow system. Noise would be eliminated by carpeted floors and sound absorbent ceilings. The plan violates many current United States code regulations although it does not violate the intent of the codes. Such a ward would cost less to build and operate, it would give greater staff use and provide greater patient satisfaction.

GARDENS AND GROUNDS, PARKING

1095. **Landscaping enhances healthcare.** *Modern Healthcare*, Chicago, 1976, March, vol. 5, no. 3, pp. 37-38.

Landscaping of the grounds of hospitals and health centres increases the confidence the patient has in the institution which should contribute to a quicker recovery. Landscaping should include gardens for sitting in during the warm weather, and provide views from inside the building all the year round. Landscaping can blend the institution into its surroundings; hospitals in towns can make use of courts and plazas to enhance the area whereas suburban hospitals can take advantage of large grassy areas. Four recommendations are: (i) keep landscaping in mind when institutions are being planned; (ii) plan to conceal and soften the appearance of large parking areas as well as services; (iii) consider security at all times; and (iv) consider low maintenance in view of the rising cost of patient care. A landscape gardening firm should maintain the grounds of the hospital, not the hospital staff.

ENGINEERING SERVICES

INSTALLATIONS IN GENERAL

1096. Dussy, R. Les "facteurs d'économie d'énergie" dans les établissements hospitaliers. **[Factors relating to the economic use of energy in hospitals.]** *Techniques Hospitalières*, Paris, 1976, April, vol. 31, no. 367, pp. 64-70, 73-76; summaries in English, German, Italian and Spanish, pp. 75-76.

The author presents various formulae for calculating annual heating requirements and fuel consumption which distinguish between constant and seasonal demands, and he discusses at some length the ways in which economies may be achieved. These include the periodic checking of piping and wiring, careful maintenance of the heat

exchange surfaces in boilers, lagging of pipes, thermostatic valves on radiators, the installation of reflectors behind radiators, and simple measures such as turning off radiators and lights when they are not required. The insulation of hospital buildings with material with the lowest possible coefficient of conductivity, the installation of double doors and double glazing, the use of the most economic type of fuel, and care in the choice of contract with the fuel suppliers will also produce major economies.

COMMUNICATION SYSTEMS

1097. BASHSHUR, R. L., ARMSTRONG, P. A. and YOUSSEF, Z. I. **Telemedicine; explorations in the use of telecommunications in health care.** Springfield, Ill., Charles C. Thomas, 1975, xvi, 356pp. $21.75

This book is a first attempt to assess the state of the art of applying telecommunications to health care delivery, an area that has become known as telemedicine. Eleven of the papers are updated versions of papers given at a conference/workshop in October 1973; three additional papers were solicited for this volume. A final chapter presents summaries of programmes in operation. A short annotated bibliography is included.

VENTILATION AND AIR-CONDITIONING

1098. BOTZENHART, K. Klimaanlagen in Krankenhäusern. **[Air-conditioning systems in hospitals.]** *Öffentliche Gesundheitswesen* (*Das*), Stuttgart, 1976, May, vol. 38, no. 5, pp. 319-323; summary in English p. 319.

Modern design and construction (for example, the use of windowless internal rooms) has made air-conditioning essential in hospitals but it is only in certain limited areas, such as operating suites, that air-conditioning is important from the point of view of hygiene. Here the need for clean air calls for a high and costly technical performance. The West German standard on air-conditioning in hospitals, DIN 1946-4, has had to be revised to meet modern requirements. The need for more frequent inspection of air-conditioning installations is stressed.

1099. MÜLLER, H. E. Zur Notwendigkeit von Klimaanlagen in Krankenanstalten. **[The need for air-conditioning in hospitals.]** *Öffentliche Gesundheitswesen* (*Das*). Stuttgart, 1976, April, vol. 38, no. 4, pp. 274-282; English summary pp. 274-275.

In 1968 the [German] Association of Health and Welfare Workers stated categorically that air-conditioning was essential in operating suites and the 1974 draft of the German Standard DIN 1946, part 4, affirms that air-conditioning is indispensable in certain areas outside the operating suite. The author puts forward a number of reasons for opposing this view. They include the following: only with extremely expensive technical equipment can hygienically acceptable air be guaranteed; air-conditioning can easily go wrong and act as a dangerous source of infection; the cost of air-conditioning is not always in an acceptable relationship to its usefulness; air-conditioning is no guarantee against anaesthesia explosions or fires; and there are side effects about which not enough is known. The conclusion is that general regulations prescribing the use of air-conditioning are misplaced: each hospital, taking into account its particular circumstances, should decide for itself whether it should be installed.

1100. STEUER, W. and SACRÉ, C. Die Effektivität von Belüftungsanlagen im Krankenhaus. **[The efficiency of hospital ventilation systems.]** *Öffentliche Gesundheitswesen* (*Das*), Stuttgart, 1976, May, vol. 38, no. 5, pp. 314-318; summary in English p. 314.

In order to test the efficacy of air-conditioning in eliminating bacteria from the air, tests were carried out in three areas of a new hospital before patients were admitted. The areas were: (i) an operating theatre with a laminar air flow cabin (440 air changes per hour); (ii) an operating theatre with air-conditioning (24 air changes per hour); and (iii) an intensive care unit with air-conditioning (11.2 air changes per hour). The air was artificially contaminated with bacteria and immediately after this up to 10,000 colonies per sq. m. were recorded, using sedimentation plate and air sampling techniques. After 30 minutes measurements were taken at five different levels. The mean average of colony counts per sq. m. gave a ratio of 1:4:58 for areas (i) to (iii) for the sedimentation technique and 1:6:366 for the air sampling procedure. This shows the efficacy of more frequent air changes in eliminating airborne micro-organisms.

MAINTENANCE OF BUILDINGS AND EQUIPMENT

1101. ROSSO, J.-P. Maintenance du matériel biomédical. **[Maintenance of biomedical equipmnet.]** *Techniques Hospitalières*, Paris, 1976, April, vol. 31, no. 367, pp. 57-61.

Biomedical equipment is defined as equipment used in the diagnosis and treatment of disease and is classified into radiological, medical electronic (monitoring systems, electrocardiographs, etc.), and medical electro-technical (operating tables, respirators, laboratory apparatus, etc.). The annual cost of maintaining all this equipment in a 500-bed hospital has been calculated to be 6.7 per cent of purchase price. Local or national commissions should be established to set standards and rules for the acquisition of new equipment. Contracts for maintenance and the supply of maintenance kits should be carefully studied. Instead of employing private contractors, groups of hospitals might be advised to employ and train their own specialist technicians and engineers. This is being done successfully by the regional hospital group in Marseilles.

EQUIPMENT, FITTINGS, FURNITURE

WARD FURNITURE, FITTINGS AND EQUIPMENT

1102. SCHNEYDER, G. von. and KLINGER, J. Der Pflegeschrank—ein Element der integrierten Versorgungs-organisation im Pflegebereich. **[The ward cabinet unit: an element for an integrated supply system on the ward.]** *Krankenhaus*, Stuttgart, 1976, April, vol. 68, no. 4, pp. 135-136.

The unit described and illustrated here is designed as a storage and working area between corridor and patients' room. It consists of an upper wall cabinet for clean utensils and materials (bedpans, kidney trays, dressings, flower vases, toilet paper, soap, towels, etc.) and a lower wall cabinet for dirty goods (waste, soiled linen and

dirty utensils, etc.). Between the two cabinets is a work surface (with sink) which can be used for writing and which also houses the elements of the call system: the surface is used for the preparation of injections and infusions and for rinsing used instruments. The unit improves the working arrangements for nurses in patients' rooms and helps communication between nurse and patient. It can be installed, both in new and existing hospitals, with modest material and structural costs.

EQUIPMENT GENERALLY

See Abstract No. 1143

MEDICAL EQUIPMENT

See Abstract No. 1101

STAFF GENERALLY

STAFF COMPLEMENTS

See also Abstract No. 1176

1103. PELLETINGEAS, M. Contribution à la recherche d'une méthode pour la mise en forme du tableau des effectifs souhaitables d'un centre hospitalier régional. **[Contribution to the research on a method for establishing the desirable complement for a regional hospital centre.]** *Gestions Hospitalières*, Mantes, 1976, March, no. 154, pp. 243-246, 249-254.

When the new Sablons Hospital, Grenoble, became operational a systematic study was undertaken to determine staff requirements. The study was carried out in consultation with staff at all levels and the methods used are described in some detail. It was estimated that to staff a post every day all year round 1.6 persons would be required (taking holidays and a five-day week into account) and two people would be needed to maintain a post at night all year round. A further eight per cent was added to allow for illness, etc. Fifteen graphs and diagrams explain the method.

RECRUITMENT

See Abstract Nos. 1111, 1112, 1162

SALARIES AND SUPERANNUATION

See Abstract No. 1123

STAFF MANAGEMENT

See Abstract Nos. 1106, 1113, 1114, 1161

STAFF TRAINING

See also Abstract Nos. 1108, 1115, 1206, 1215

1104. RIQUET and SERISE. La médecine préventive hospitalière face à l'enseignement de l'hygiène et de la sécurité. **[Preventive medicine in hospitals faced with the teaching of hygiene and safety.]** *Techniques Hospitalières*, Paris, 1976, April, vol. 31, no. 367, pp. 42-45; summaries in English, German, Italian and Spanish, pp. 45-46.

Although the basic function of preventive medicine in the hospital is prevention and not education, nonetheless the department of preventive medicine has to concern itself with instructing staff in the elements of hygiene and dietetics, and in methods of preventing accidents, infection and radiation injury. Not only nurses, midwives, catering and administrative staff require this type of instruction but also, and above all, doctors and architects. The training of medical undergraduates should include courses in hygiene and safety as well as in pathology and therapeutics, and hospital architects and engineers should attend courses at specialist university institutes.

1105. GORONZY, D. W. and SMITH, G. C. **Area health education center eases manpower maldistribution.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 109-110, 112-114.

An area health education centre is being used to reduce the cost of training doctors, nurses and other health staff and to ease the maldistribution of medical manpower in Appalachia. The South East Tennessee Area Health Education Center (SETAHEC) covers 13 counties. The area, which is rural and inaccessible, has 25 hospitals with a total complement of 2,853 beds, but 2,080 of these beds and 12 of the hospitals are sited in Chattanooga; the remaining 13 range from 27 beds to 94 beds. The ratio of doctors in the area is lower than the national average (one per 1,115 compared with one per 711 people). SETAHEC was established in the 1970's, and aims to administer training schemes for doctors and nurses, develop core curricula and produce a unified approach to health manpower needs. Four planning tools have been developed: (i) analysis of the community served; (ii) profile of the health care delivery system; (iii) index of manpower resources; and (iv) an index of health education schemes. The initial study also suggested other important functions which have been accepted: (i) a manpower plan and registry; (ii) placement and recruitment; (iii) technical assistance to schools; (iv) encourage and finance research; (v) continuing education for all professionals; and (vi) consumer education. A shared library system for the hospitals has also been developed. A clinical education centre is now being planned for all the facilities provided by SETAHEC. It is hoped that within 10 years all non-patient care activities in hospitals will be placed in an educational setting that will make the best use of available resources while providing high-quality training.

STAFF WELFARE

See Abstract No. 1195

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

1106. DAVIS, H. J. and BLALACK, R. O. **Need satisfaction and the unit manager.** *Hospital Topics*, Chicago, 1976, Jan./Feb., vol. 54, no. 1, pp. 31-34.

The need satisfaction standards of the 28 unit managers in a 1,000-bed teaching hospital were analysed by the Porter Need Satisfaction Index in conjunction with Maslow's Need Hierarchy. A questionnaire was based upon a hierarchy of five needs satisfied by the work of the unit managers: (i) security; (ii) social; (iii) esteem; (iv) autonomy; and (v) self-actualization. A seven-point scale was drawn up for each need in relation to the work carried out. The findings revealed that the unit managers were least satisfied with those areas of their work they felt to be of most importance. The greatest lack of satisfaction appeared among the least dominant needs: esteem, autonomy and self-actualization. In order to improve job satisfaction a scheme should be developed to examine all the current deficiencies in those areas of importance to the managers. Hospitals must offer opportunities for such needs to be satisfied if they hope to retain the services of professional unit managers.

MEDICAL STAFF

See Abstract Nos. 1184, 1206

NURSING STAFF

See also Abstract Nos. 1176, 1204

1107. CHAPMAN, C. M. **The use of sociological theories and models in nursing.** *Journal of Advanced Nursing*, Oxford, 1976, March, vol. 1, no. 2, pp. 111-127.

As nursing and sociology are both concerned with people and the way they interact, it is likely that theories developed in either discipline will provide insights for the other. The theory of social-exchange is therefore viewed in the light of the nurse and patient seeking to meet their own needs and goals and a model is suggested which may indicate levels of satisfaction. Organization theories and patterns of power and compliance are considered in the context of their effect on goal achievement and tentative explanations are offered for behaviour by nurses and patients that might be considered deviant.

1108. LANCASTER, A. **Towards a research-based profession.** *Nursing Times*, London, 1976, April 22, vol. 72, no. 16, pp. 632-633; April 29, vol. 72, no. 17, pp. 672-673.

The role of nurse educators in developing an understanding of nursing was discussed at a meeting of organizers of tutors' courses and education officers from government departments and statutory bodies. The first part of this paper describes the objectives which they agreed were necessary for research-based teaching and practice. These were formulated under two headings: (i) those which can be expressed in fairly precise behavioural terms, and provide criteria for testing students' learning at the end of the

course; and (ii) those which present long-term patterns of behaviour—students' subsequent attitude to professional responsibility, and their response to the demands made upon them in a variety of positions. The second part discusses the implementation of these objectives with particular reference to research-based teaching and practice, project work, the research content of tutors' courses and the role of the statutory bodies.

1109. ROPER, N. **An image of nursing for the 1970s.** *Nursing Times*, London, 1976, April 29, vol. 72, no. 17, occasional papers, pp. 61-64; May 6, vol. 72, no. 18, occasional papers, pp. 65-66.

In the 1940s the majority of patients were bedfast and the nurse's image was that of one caring for sick people in bed but in the 1960s early ambulation was being increasingly practised. To discover how far the nurse's image has changed, a study was made of each patient in each clinical area to which one selected school of nursing in Scotland allocated its general student nurses. Analysis of the data showed that only 23 per cent of the patients in the general hospital were never out of bed, and that the two orthopaedic wards had the highest percentage of bed patients, 70 and 72 respectively. Nine tables and two charts give details of the study. The cross tabulation of the patients' in/out of bed status by dependence/independence for five activities of daily living (washing, bathing, mouth cleaning and dressing and undressing) showed that increased patient mobility entailed more clinical judgement, decision making, teaching, organization and management for the staff. It is noted that those most junior and least prepared are those who help the patients with daily living activities and that this system should be changed. The importance of nursing care in preventing complications, bed-sores, etc. is emphasized. The importance for student nurses of patients being given medical labels for each condition to accustom them to recognizing any untoward symptoms is also emphasized.

1110. EMERTON, A. C. **The reorganized National Health Service: staffing problems in nursing.** *Royal Society of Health Journal*, London, 1976, April, vol. 96, no. 2, pp. 58-62.

As the National Health Service has evolved many changes have taken place, often creating new demands on the nursing service. The changing concept in medical care requires the nurse to have a broader knowledge to ensure safe handling of patients and machinery in preventive medicine, diagnostic procedures and actual treatments. Changes in society have created new needs, shortened stays in hospital, provision for geriatric care and the need for community and hospital psychiatric nursing expertise to only name a few. Changing government policy such as the extension of the family planning service has called upon more training resources which cannot be met in the current financial situation. However the increase in nurses' salaries has raised their professional status. Future demands affecting nursing are foreseen in the following areas: (i) child health; (ii) midwifery; (iii) general acute incidence of illness; (iv) mental illness; (v) mental handicap; (vi) national and regional specialties; and (vi) geriatrics. To meet these needs it is important to: (i) identify the role of the nurse; (ii) assess the new role of nursing manpower; (iii) provide education and training to meet the professional needs and the general public; (iv) recruit nursing staff; and (v) set standards of care. Various tables and statistical information regarding student nurses and employment are given.

1111. CLELAND, V. and others. **Social and psychologic influences on employment of married nurses.** *Nursing Research*, New York, 1976, March/April, vol. 25, no. 2, pp. 90-97.

A sample study was carried out of married registered nurses in Michigan in 1972 to analyse the influences on their decisions to work. Seven variables were established that could exert positive or negative pressure: (i) financial resources; (ii) housewife's services; (iii) household resources; (iv) motivations; (v) family ideology; (vi) job context; and (vii) job content. The nurses were all under 60, living with their husbands, and had at least one child of 18 months or under. A Varimax rotation of 21 variables and a principal components factor analysis produced seven summary factors: career desirability; professional attitude; professional behaviour; achievement attitudes; conducive home situation; economic value of work; and satisfaction with nursing. These factors were compared with role of employment: the current work of all subjects and subjects whose employment status had been the same for the past five years. Both groups of nurses scored lowest on satisfaction with nursing, with the five-year staff scoring lower. When the seven factors were correlated with the employment status while controlling financial need and age of the youngest child at home, the highest correlation scores were for professional behaviour, career desirability and the economic value of nursing. There is a need for increasing the attractiveness of nursing. When nursing recognizes a low work force as a problem rather than an inevitable association with a woman's profession, methods will be found to modify these costly social patterns.

1112. BROWN, B. J. **How to succeed in recruiting.** *American Journal of Nursing*, New York, 1976, April, vol. 76, no. 4, pp. 604-605.

The problems of recruiting and retaining staff in a private community hospital in an area already suffering from a severe shortage of nurses confronted Doctors Hospital, Milwaukee, Wis., when it decided to move from traditional to family centred care. A community education scheme was launched, together with the change in name of the hospital to Family Hospital. In-house workshops allowed staff to relate more positively to their professional role and patient-teaching schemes increased community involvement. A three-month internship scheme was also established. Seminars and a national conference have promoted the hospital, together with papers in journals and advertisements. Scholarships have now been offered, and this involvement in nursing education has strengthened the recruitment scheme. The initial recruitment aims have now been reached: 170 registered nurses give direct patient care. A diversified recruitment plan may always be necessary, using all media to attract and retain nurses; however, the chief reason for success has been education both for the community and for the nursing staff.

1113. HALL, D. C. **Nursing personnel systems.** *Journal of Advanced Nursing*, Oxford, 1976, Jan., vol. 1, no. 1, pp. 79-87.

The best way to cope with the 'identity crisis' in nursing is to develop a nursing personnel system, allowing mobility of staff. Two major patterns of nursing emerge: (i) a horizontal health personnel system; and (ii) a medical system which resembles a ladder. The nursing personnel system should be on a planned basis rather than on an expediency basis which is usually the case and has resulted in nursing being largely

hospital- and illness-oriented. The dichotomy of the cure/care system is discussed. The role of nursing care is considered to be of importance even though nursing has done nothing positive to demonstrate the differences or interrelationships between cure and care. A rational nursing system with a corresponding system for the education of all the categories of workers in the personnel system is essential to achieve this objective. A system with two or more levels or categories through which nursing services can be adequately delivered should be developed which will help provide effective nursing care and promote nursing leadership.

1114. WRIGHT, E. **Registered nurses' opinions on an extended role concept.** *Nursing Research*, New York, 1976, March/April, vol. 25, no. 2, pp. 112-114.

A random sample of 800 nurses registered with the Texas State Board of Nurse Examiners were surveyed regarding the extended role concept as reflected by the family nurse clinician (FNC). Thirty per cent of questionnaires were returned and used for analysis. The survey found that the nurses' years of nursing experience, employment level, field of employment and educational background influenced their opinions on the extent to which they thought the FNC could assume the defined responsibilities, the areas of health care in which the FNC could exert a positive influence and anticipate problems. The average range of nurses had 15.7 years of nursing experience, 70 per cent of the nurses were employed in a hospital setting and 26 per cent in the community. The nurses were in favour of the FNC assuming responsibility for the delivery of primary health care.

1115. MARSON, S. N. and TOWNSEND, I. **Educational technology . . . a movement for change: the future of educational technology in British nurse education.** *Journal of Advanced Nursing*, Oxford, 1976, March, vol. 1, no. 2, pp. 155-162.

A short introduction summarizes the global development of, and current trends in, educational technology in general and higher education. The main body of the text details parallel developments in nurse education and outlines a strategy for spreading its benefits more widely in the United Kingdom. The following points are discussed: (i) the present 'state of the art' in nurse training schools, in particular the trend towards the individualizing of instruction by such means as programmed learning, audio-visual training packages and learning resources centres; (ii) the need to sustain such innovatory efforts, and possible reasons for failure: (iii) current involvement of statutory nursing bodies in developments in educational technology; (iv) work of the National Health Service Learning Resources Unit in changing attitudes towards, and furthering development of, educational technology; (v) policies for future developments which include the establishment of learning resources centres, for use by learners in nursing colleges and nursing service areas, and media resources centres, for the production of learning resource materials, the in-service training and support of nurse teachers engaged in developing such materials; and (vi) the changing role of the nurse teacher in a resource based system.

1116. STONE, S. and others, editors. **Management for nurses: a multidisciplinary approach.** Saint Louis, Mosby, 1976, xii, 280pp. £4.55

This book is a collection of papers selected to enable nurses to learn the concepts of leadership and management and to apply them. The papers are arranged in three

sections; (i) structural factors and their influence on efficient organizational functioning; (ii) personnel factors and their influence on efficient organizational functions; and (iii) economic or extrinsic factors and their influence on efficient organizational functioning.

1117. HOWARTH, M. H. **Activity sampling in nursing.** *International Journal of Nursing Studies*, Oxford, 1976, vol. 13, no. 1, pp. 47-53.

This paper discusses the development of activity sampling for use in a study of ward and departmental staff which was carried out in 1969-70. The literature on observation studies of nursing is first reviewed. In this study it was decided to observe 25 per cent of the working hours of each ward and department. This gave 279 hours of observation at 10-minute intervals which resulted in 1,674 observations of all staff on duty. The recordings were made free-hand for all staff on a recording sheet drawn up for each hour. Only one hour was observed at any time in one area, except night duty and these were done completely randomly. No more than four hours were done by the observer in one day.

1118. BULLOUGH, B. **The law and the expanding nursing role.** New York, Appleton-Century-Crofts, 1975, x, 212pp. £5.00

The role of the registered nurse is in a state of almost revolutionary change as nurses in both acute and ambulatory care take on a variety of new responsibilities. This book is in three major sections: (i) background; (ii) the practice setting and the experiences with the law by nurses in the field; and (iii) current and changing nurse practice acts, contrasting different approaches to the easing of role expansion.

1119. KOMAROFF, A. L. and others. **Nurse practitioner management of common respiratory and genitourinary infections, using protocols.** *Nursing Research*, New York, 1976, March/April, vol. 25, no. 2, pp. 84-89.

Beth Israel Ambulatory Care (BIAC) Center, Boston, Mass., is an adult walk-in unit in which nurse practitioners have a major role to play in the care of patients with acute minor illnesses. The situation is assessed by problem-oriented protocols. All patients with symptoms of respiratory tract infection and all female patients with urinary tract and vaginal infection symptoms were studied to examine the quality, efficiency and costs of the traditional method of patients assessed by doctors and the experimental method using nurse practitioners. No serious illnesses were overlooked by either section; 86 per cent of patients in the nurse section reported relief from their symptoms as did 72 per cent of patients in the traditional section. The time spent by doctors in seeing patients was reduced from 15.5 minutes per visit to 1.4 per visit. Costs of care per visit were equivalent in both sectors, costs of laboratory tests and drugs ordered were 27 per cent less in the nurse sector. The study was limited in scope since the total number of providers and patient visits and the length of time for the assessment of the study were too small, and only two acute minor illnesses were considered. A total estimate of the overall efficiency and costs of operating the walk-in unit was not carried out, but the hospital has encouraged the use of the nurse-protocol method of care which is now in its third year.

1120. DIETRICH, G. **Nurses in the therapeutic community.** *Journal of Advanced Nursing*, Oxford, 1976, March, vol. 1, no. 2, pp. 139-154.

This paper shows the advantages of therapeutic communities in psychiatric hospitals over traditionally run institutions. Advantages are considered in relation to both patients and nurses. Some generalizations are made and a number of pertinent questions are posed; answers are suggested where this was deemed possible, i.e. not very often.

1121. HOCKING, I. L., HASSANEIN, R. S. and BAHR, R. T. **Willingness of psychiatric nurses to assume the extended role.** *Nursing Research*, New York, 1976, Jan./Feb., vol. 25, no. 1, pp. 44-48.

A study of 49 psychiatric staff nurses in three midwestern institutions was carried out to identify characteristics of psychiatric nurses who are willing to assume increased responsibility. A questionnaire and a structured statements test were completed. The results indicated that nurses who were willing to extend their role tended to be young, recent graduates, with few years of nursing and psychiatric nursing experience. Administrators who wish to implement the extended nursing system should consider the series of results revealed by the questionnaire in relation to their staff.

1122. WALKER, J. F. **Midwife or obstetric nurse? Some perceptions of midwives and obstetricians of the role of the midwife.** *Journal of Advanced Nursing*, Oxford, 1976, March, vol. 1, no. 2, pp. 129-138.

Accepted definitions of the midwife suggest that she is a woman trained to care for other women during the normal childbirth process; a complementary role to that of the obstetrician who is concerned primarily with the application of scientific knowledge to ensure as far as possible the physical well-being of mother and infant. In this paper the relationship between midwives and the medical profession is examined, with particular reference to their perception of the role of the midwife and her responsibility in maternity care. It is argued that the claim of midwives to be practitioners in their own right within a limited field is rarely recognized in practice. Some implications of this finding are discussed.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See Abstract No. 1185

ANCILLARY STAFF

1123. BAXTER, G. N. **Pay and productivity for ancillary staff.** *Health and Social Service Journal*, London, 1976, May 15, vol. 86, no. 4490, p. 896.

An assessment of the history of pay and productivity schemes for ancillary staff in the National Health Service is given. In 1967 the concept of pay linked to productivity was introduced together with the recommendation that bonus earning opportunities be introduced. However, with the advent of the pay freeze and later the £6.00 per week limit on pay increases, new productivity agreements are not permissible. The target of a 75 to 80 per cent coverage of ancillary staff with incentive schemes by 1978 has been

deferred; yet while inflation is the major preoccupation of the government, productivity can clearly play a part in helping to solve the problem. The national commitment to the scheme remains, and well-designed incentive schemes can play their part. Commitment to the scheme together with the right attitude of senior managers will result in the harnessing of the potential of ancillary staff for the benefit of the service.

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 1087, 1116, 1180, 1211

1124. ELLIS, C. **One hospital's MBO program: less direct authority, more staff involvement.** *Modern Healthcare*, Chicago, 1976, April, vol. 5, no. 4, pp. 45-48.

Ely Bloomenson Community Hospital, Ely, Minn., has 145 beds, of which 100 are long-stay, and 214 full- and part-time staff. This paper describes how a management by objectives system was implemented in the hospital, how it was applied in some departments, and some of the results obtained. The board of directors first established eight over-all objectives, after which the 18 supervisors were asked to establish objectives for their departments. Departmental objectives also list procedures and designate responsibility for carrying out tasks.

1125. LAVERTY, F. T. and LAVERTY, M. R. **Health care by objectives.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. 26-29.

Management by objectives (MBO) is a system of management designed to obtain maximum use of resources as they are converted by programmed activities into products or services and then measured for their economic or social value. MBO can be applied to medical, scientific and administrative areas and is based on three dimensions of objectives: regular, problem solving and improvement, all related to the three levels of stability, correction and growth. A simplified approach to objective setting and the establishment of performance indicators is outlined. The system is based on the knowledge that staff concerned with the establishment of objectives will be more inclined to complete their tasks satisfactorily. MBO, through its emphasis upon clarity of objectives, is a motivational system which can be used with great effect in hospitals and other health care organizations.

1126. PRUVOST, R. Introduction à une étude sociologique de l'hôpital. IIIe partie. Le sous-système managerial. **[Introduction to a sociological study of the hospital. Part 3. The managerial sub-system.]** *Gestions Hospitalières*, Mantes, 1976, March, no. 154, pp. 203-205, 207-210, 213-222.

Since so many decisions which affect the administration of public hospitals in France are taken outside the hospital, e.g. at ministerial level, it cannot be said that hospital administrators are in complete charge within their institutions. There is also the fact that the doctors make their own decisions and do not have to consider the effects that these will have on the organization as a whole. Insofar as the administrators do run their hospitals, there are various ways in which they can do so. The author reviews current theories on styles and types of management and considers at length 'management by objectives' which is based on the notion that man is a source of energy, creativity, and

devotion. The task of the good manager is to motivate his staff in such a way that their objectives merge with those of the organization. Ways in which this can be achieved—improvements in the flow of information between management and staff, refresher courses, and periodic re-evaluation of medical and management objectives—are suggested. There is an extensive bibliography, mainly of French literature.

1127. FREIDSON, E. **The development of administrative accountability in health services.** *American Behavioral Scientist*, Beverly Hills, 1976, Jan./Feb., vol. 19, no. 3, pp. 286-298.

The author outlines the legislative history of health services in the United States and considers whether data now becoming available to administrators and analysts is suitable for determining whether humane health care, the asserted intent of this legislation, is being put into practice. The effects of Medicare and Medicaid legislation and the consequent introduction of individual hospital service utilization reviews and of claims reviews, also the likely effects of the establishment of the National Professional Standards Review Council and regional professional standards review organizations to develop and enforce cost controls and care standards are discussed. Health maintenance organizations are considered as insurance accounting group and medical group organizations. The author concludes that the data produced, on diagnosis, patient characteristics, hospital services provided and procedures performed, will be useful from administrative, technical and fiscal view points but are of no account in evaluating the quality of health care as an essential element of the therapeutic relationship.

1128. GREENFIELD, H. I. **Accountability in health facilities.** New York & London, Praeger, 1975, xii, 180pp. £8.25

The first five chapters each consider the internal (legal, governance, professional, and flow-of-funds) and external (legal, governance, quality and functional, fiscal and cost, and consumer) accountability of a type of health facility: voluntary hospitals, Veterans Administration hospitals, state and local health facilities, proprietary hospitals and neighbourhood health centres. A final chapter discusses the improvement of mechanisms for accountability and an epilogue is concerned with alternative conceptions of accountability.

1129. LAMY-RESTED, M. S. Le système ministériel d'analyse comparative de gestion hospitalière. **[The official system for comparative analysis of hospital management.]** *Gestions Hospitalières*, Mantes, 1976, March, no. 154, pp. 232-233.

Data relating to costs, operations, and staffing from 200 non-specialist hospitals have been collected by the Data Analysis Section of the French Ministry of Health, and analysed by computer so that comparisons of costs and performance could be made between hospitals in each of three groups—regional, larger, and smaller hospitals. Now that data for three consecutive years are available the Ministry is encouraging the establishment of data analysis sections and of consistent and complete information systems in regional hospitals. A budgetary guide giving indicators for costs, staffing, and operations is in preparation. Studies of costs in specific departments are in progress and a Gulliver model for forecasting and a new system of classifying hospitals are being prepared. Recommendations on analytical accounting and budget presentation will be sent to hospitals with a view to obtaining better comparability of data.

1130. PICARD, M. Mise en place d'un relais régional en matière d'analyse de gestion hospitalière. **[The place of the region in the analysis of hospital management.]** *Gestions Hospitalières*, Mantes, 1976, March, no. 154, pp. 234-236.

Analytical work on hospital management is now being done by the Analytical Section in the regional social security office in Nantes. Data on the six hospitals in the region which were included in the national sample (see Abstract No. 1129) are being studied by various working parties. A Ministry inspector has made recommendations to these hospitals for improving the harmonization of the data collected. The accounts of 23 other hospitals in the region not included in the national sample are being studied with particular reference to the structure of the balance sheet, the calculation of various ratios, indices of changes in the period 1969 to 1973, short- and long-term financial security, stock rotation, and the state of equipment. Further studies are envisaged, in particular on the structure of operational costs and on psychiatric hospitals.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract Nos. 1201, 1220, 1221

1131. HOFMANN, H.-U. Problematik des externen Betriebsvergleiches zur Beurteilung der sparsamen Wirtschaftsführung. **[Problems of comparison with outside undertakings in evaluating economic management.]** *Krankenhaus Umschau*, Kulmbach, 1976, May, vol. 45, no. 5, pp. 329-330, 333-334.

This paper describes a system of grouping the hospitals of Bavaria according to size and performance in order to make comparisons between hospitals of similar standing possible. A list of 28 parameters (reproduced in the paper) was drawn up: numbers one to 10, including such items as bed complement, staffing, facilities for diagnosis and treatment, patient days, etc., which provide a first rough grouping; numbers 11 to 25 (number of specialists, intensive care, general practitioner beds, etc.) which provide a finer subdivision; and numbers 26 to 28 (total cost per bed, cost per patient day, and use levels) which were not used in the grouping process. A graph shows the values obtained for these parameters for 15 hospitals which clearly divide into four groups.

1132. LEADER, A. H. and PAYNE, M. H. **An analysis of health care production in hospitals: a view of sub-system outcomes.** *Hospital Topics*, Chicago, 1976, Jan./Feb., vol. 54, no. 1, pp. 35-36, 38-39.

An administrator who wishes to improve the efficiency of his department should analyse the current situation, compare his hospital with others and assess the total departmental output. A method for collecting such information using outcome/source matrices which consider the hospital as an inter-related system of departments, services and units is outlined. Seven hospitals in Michigan participated in the study and outcome/source matrices were prepared for 29 hospital departments from the information they provided. Each matrix contains three inter-related classes of information: outcomes, data sources and combinations of these features. The sub-section outcomes are effectiveness and efficiency, and the potential and suggested combinations that can be read off are: (i) where to go for outcome information; and (ii) what information reporting can be assigned to a data source. The matrix sheets may also be used for compiling job descriptions, evaluating standards or collecting routine information. An example of a matrix is included in the paper.

1133. MUNK, V. and GEISSEL, V. Grundlagen zur Entwicklung von Kriterien zur Beurteilung der sparsamen Wirtschaftsführung eines leistungsfähigen Krankenhauses. **[Bases for the development of criteria for evaluating the economic management of an efficient hospital.]** *Krankenhaus Umschau*, Kulmbach, 1976, May, vol. 45, no. 5, pp. 336, 339-342, 345.

Recent West German hospital legislation requires hospitals to be 'economically managed and efficient'. This paper is concerned with the establishment of the criteria by which this requirement can be assessed. It first defines 'economic management' and 'efficiency' in this context and discusses fixed and variable costs in relation to capacity and performance. Efficiency may be determined by comparing a hospital's performance during a given period with that of a corresponding earlier period, by comparing the performance of one hospital with other like hospitals, and by comparing the performance of specific departments with those of another like hospital. Criteria would have to be developed gradually: the first requirement would be the compilation of national statistics to act as a yardstick so that those hospitals which fell below an acceptable level could be investigated.

1134. UEHLINGER, A. Grenzen der Medizin am Kantonsspital Schaffhausen. **[The limits of medicine at the Schaffhausen Cantonal Hospital.]** *Veska*, Aarau, 1976, May, vol. 40, no. 5, pp. 229-234.

The need to make every effort to keep hospital costs within bounds is discussed by a departmental medical chief of the Schaffhausen Cantonal Hospital (which has recently been rebuilt) in relation to health services in Switzerland as a whole and his own hospital in particular. What is required is more national co-operation: a programme of national research into needs and resources, extending over four years is recommended. The problem is considered under seven heads: the role of the State and legislation; the structure and function of hospitals; administration; medical services; nursing; the patient; the population as a whole. In the medical field proposals made include: standards for diagnostic procedures to avoid extravagance; elimination of unnecessary tests; a limited drug list, to be revised periodically; more out-patient and general practitioner care; and more co-ordination of work flow to reduce length of stay. There needs to be more education of the public to make them more cost conscious and reduce unnecessary demands on the hospital service.

RUNNING COSTS

1135. HILL, D. B. **Identification of hospital cost determinants: a health planning perspective.** *Inquiry*, Chicago, 1976, March, vol. 13, no. 1, pp. 61-70.

Comprehensive health care planners have to determine the allocation of resources in a way that will best meet a populations' needs. Hospital costs are a chief cause for concern. Various hospital cost determinants that are particularly subject to the influence of planning processes are studied. The importance and interdependence of the supply of health resources, the organization of medical care services and the financing of both hospital services and other medical care services is demonstrated, together with the distribution of patients, size of hospitals and the services available. Evidence supporting an 'availability effect' in hospital services suggests that excessive use would be a

consequence of planning for "too many' hospital facilities. Visible excess capacity would be partially absorbed by excessive use. Health planning methods capable of linking all relevant variables will be essential in any health sector environment which may evolve.

1136. MÜLLER, H.-W. Das Krankenhaus und die gesetzliche Krankenversicherung—Möglichkeiten einer Kostenbeschränkung. **[The hospital and statutory sickness insurance—possibilities of cost limitation.]** *Krankenhaus Umschau*, Kulmbach, 1976, May, vol. 45, no. 5, pp. 317-318, 323-324, 327-328.

Over the period 1951 to 1974 total expenditure on statutory health insurance in Western Germany increased 18-fold while that for hospital in-patient care increased 30-fold. In 1974 30 per cent of all health insurance expenditure was for in-patient care. This paper discusses various possible expedients for reducing hospital costs. The following are considered to be of doubtful value: reduction of the (alleged) 'bed mountain'; reduction of average length of stay; and the carrying out of diagnostic procedures before admission. Measures considered to be more promising include the following: a radical re-assessment of bed needs for individual specialties; the provision of more long-stay hospitals, geriatric hospitals, nursing homes, and day/night hospitals to relieve acute beds; better organization of management and staffing; control of drug supply; less rigid division between in-patient and out-patient care; better collaboration with general practitioners; and more flexible budgeting.

1137. REINFRANK, R. F. **Physicians as diagnosticians—a critical variable in hospital costs.** *Hospital Medical Staff*, Chicago, 1976, Feb., vol. 5, no. 2, pp. 22-25.

Despite concern over high expenditure for health care no clear-cut strategy for cost containment has emerged. Efforts to cut costs must be determined by the admission patterns of doctors and the care provided by hospitals. The doctor's degree of certainty or uncertainty regarding the patient's condition determines whether the patient is to be admitted to hospital. The need for rapid recognition of the condition of the patient will decrease the possibility of misusing hospital resources. However, the cost of processing the amount of information to diagnose the lack of disease may be higher than the cost of demonstrating the presence of disease. A system of rational admission criteria, early discharge planning and a review of the use made of the hospital would result in appropriate cost controls. The first steps in cost control should be in well-designed patient care research projects to identify the areas where facilities are misused by both professionals and non-professionals. The aim of cost containment is to work towards improving patient care, which may, in the long run, contribute as significantly as cost consciousness to cost containment efforts.

1138. RINGROSE, D. and HUESING, S. **Long-stay patients and cost control.** *Dimensions in Health Service*, Toronto, 1976, April, vol. 53, no. 4, pp. 37-38, 40-41.

A study carried out between April 1974 and June 1975 at the Misericordia Hospital, Edmonton, of costs for 100 obstetrical and gynaecological patients according to length of stay and diagnostic and therapeutic services given is described and its results considered with a view to providing high quality care at low cost. It was generally assumed that length of post-operative care would in most cases be proportional to the quality of care. The average cost per patient day was approximately $10.03, the length of stay

ranging between 14 and 67 days. In gynaecology the long-stay, high-cost group could constitute between 0.8 and 15.5 per cent of the total number of patients depending on the doctor involved, and in obstetrics between nought and five per cent. Greater use of auxiliary hospitals, alternative methods of treatment and out-patient facilities was recommended, also the possible introduction of an incentive bonus scheme for good performance and, if necessary, a request by the hospital to any doctor with a morbidity index of more than one to seek more training to upgrade his skill. The paper includes the text of the national yearly performance index for obstetrics and gynaecology and 10 tables.

BED OCCUPANCY, ECONOMIC USE OF BEDS

See also Abstract Nos. 1137, 1138, 1222

1139. CHORBA, R. W. **Potential avoidability: a statistic for controlling in-patient utilization in acute care hospitals.** *Management Science*, Providence, R.I., 1976, Feb., vol. 22, no. 6, pp. 694-700.

A patient-day of service in a hospital can be considered as potentially avoidable if the unique facilities and manpower of an acute care hospital are not essential to providing the services received. Although not all potentially avoidable days can be avoided, norms can be established related to diagnosis, type of surgery, age and sex, which specify an acceptable range for the percentage of potentially avoidable days. A sample survey of patient service delivered at three major hospitals was studied and a method developed for efficiently assessing potential avoidability, making it feasible to measure this concept for every patient on a daily basis. A maximum of 12 variables must be used to produce 95 per cent accuracy. The resultant data base can be used for studying abnormal patterns of use by case, doctor or hospital. The concept of potential avoidability can be reliably and inexpensively measured, with considerable value for the administrators as an indication of problem areas and a control system.

1140. TOM, B. C. K. and others. **Pay the peers: utilization review with a team approach and payment of physician reviewers.** *Journal of the American Medical Association*, Chicago, 1976, Feb. 16, vol. 235, no. 7, pp. 738-741.

The revised review system adopted in 1973 by the 480-bed Queen's Medical Center, Honolulu, is described. High priority is given to analysing appropriateness of admission, length of stay based on level of care, early diagnosis, proper management and prompt discharge. Bi-monthly meetings are held by a committee including medical and paramedical staff and the third-party insurance carrier. The 19 head nurses became part of the review team, examining all ward patients daily for changes indicating a need for review of their stay condition. Medical reviewers based their decisions on the nurses' recommendations, the patients' medical chart and, if necessary, discussion with the attending physicians. Each specialty has its own peer review system functioning through sub-committees of the hospital-wide professional activities review (PAR) committee, which complements medical staff and administrative changes. Results of the review include: (i) a 10 per cent reduction in average length of stay; (ii) reductions in inappropriate admissions, indicating that the hospital is now being used more frequently by acutely ill patients; (iii) costs, including the $70,000 payment to reviewers, were not necessarily less, but were distributed in a more useful way; and (iv) com-

munication and co-operation between medical, nursing and administrative staff showed noticeable improvement, and medical staff having been both reviewers and reviewees, showed tolerance and appreciation of the systems and also improved performance in patient care.

1141. FREIBERG, L. and SCUTCHFIELD, F. D. **Insurance and the demand for hospital care: an examination of the moral hazard.** *Inquiry*, Chicago, 1976, March, vol. 13, no. 1, pp. 54-60.

While the occurrence of illness or injury is essentially a random event, its institutional treatment is determined to a large extent by the individual being insured; hence, medical insurance increases the demand for treatment. The extent of this 'moral hazard' was examined by studying group insurance data for families in Kentucky. The three propositions studied were: (i) the demand for in-patient services is subject to moral hazard; (ii) since co-insurance lowers costs families demand more treatment for a given illness; and (iii) there is a substitution effect between in-patient and out-patient services demanded as a result of co-insurance. Results from 13 group-family insurance plans yielded an elasticity of demand of —.229. This indicated that a 10 per cent decrease in the level of co-insurance would result in a two per cent increase in admission rates. The level of co-insurance appeared to have little effect upon the average length of hospital stay. No link was found between the effect of co-insurance upon the substitution of out-patient care for in-patient care, but further research is needed.

APPOINTMENT SYSTEMS, WAITING LISTS

1142. SINGER, M. E., ROSSFELD, J. E. and VAN HALL, M. C. **Centralized appointment system reduces patients' waiting time.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 151-152, 154, 156-157.

Harbor General Hospital, Torrance, Calif., serves as a major teaching hospital, research centre and referral centre for specialty patients. The appointment system in use in 1973 was the decentralized 'block' appointment method with each of the 104 specialty clinics responsible for scheduling appointments according to their own needs. There was no organized system and no central authority for controlling patient flow. An appointment centre has now been established with primary responsibility for handling clinic appointments. This has resulted in a number of positive changes in the methods used by the hospital to care for out-patients. It has reduced the average waiting and treatment time, and highlighted areas in which the organization is no longer as effective as expected. The training for the appointment receptionists is outlined. Plans are currently being made to computerize certain aspects of the system and to develop staffing levels commensurate with community and hospital needs.

OFFICE MANAGEMENT AND METHODS

1143. WYND, G. D. **Business equipment can help cut costs.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. 70, 72.

Business equipment adapts itself readily to hospital use. The field of business equipment is highly competitive and much progress has been made in streamlining the

task of record-keeping. Examples of hospitals in Canada that have adjusted their systems are given. The effects of microfilm and computers are outlined. Considerable savings in costs have been achieved, together with increased efficiency, by the use of new business methods and equipment.

DATA PROCESSING

See also Abstract Nos. 1192, 1193, 1197, 1202, 1206

1144. INTERNATIONAL HOSPITAL FEDERATION. **The application of computer techniques in health care, with special regard to hospitals: report prepared by a special study group. Editors: W. Schneider and S. Bengtsson.** *Computer Programs in Biomedicine*, Amsterdam, 1976, Feb., vol. 5, no. 3, pp. 169-250.

The group considered expectations by health care administrators and professionals of computer science and technology performance and emphasized the need for adequate prior definition of the specific requirements and problems of hospital information systems. A flexible system using a common data base is recommended and a model health information service described. Cost-benefit and cost-effectiveness studies prior to system introduction are advocated, also the essential need for close user co-operation. The relative merits of systems and applications software are discussed and a hierarchically organized hardware/software configuration made up of small, medium and large capacity machines recommended. Health care professionals should be trained to understand the basic concepts of the system, possibly in nursing or medical school; further and more detailed instruction should be given to those likely to be involved with medical informatics, the design, implementation and use of health information services. Management projects should be aimed at optimization between resources and patient care provision in a cost-effective way. Patient care and medical records data should be combined in the common medical data base. Laboratory systems are progressing currently through the advancement of microprocessor technology. It is pointed out that complete confidentiality cannot yet be ensured. The establishment of a library containing information about existing good and bad systems, to be arranged possibly by the International Hospital Federation, is recommended.

1145. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSTITUT. Sekretess och integritet i samband med ADB inom sjukvården. **[Secrecy and privacy in connection with ADP in medical care.]** (Spri Rapport 10/75) Stockholm, Spri, 1975, 97pp.

The rapid development of electronic data processing (EDP) has given rise to new changes of intentional and unintentional invasion of privacy, particularly in medical care. Under new Swedish legislation, EDP systems in medical care must satisfy the requirements of the Data Act and the Data Inspection Board. The present act is regarded as provisional, and it is important that experiences are reported to the Board. The special problems of EDP privacy in medical care are considered. Proposed general recommendations for handling computer-stored patient information have been drawn up by a Spri working group; these are included. Examples are given of sensitivity ranking of patient data and of security systems. [This abstract has been prepared from an English summary of the report.]

ORGANIZATION AND METHODS, WORK STUDY

See Abstract No. 1117

MEDICAL RECORDS

See Abstract No. 1145

HOSPITAL STATISTICS

See Abstract No. 1218

PUBLIC RELATIONS

1146. OERLE, P. G. M. van. Het medisch jaarverslag van algemene ziekenhuizen. **[The medical annual report of general hospitals.]** *Ziekenhuis*, Utrecht, 1976, May 19, vol. 6, no. 10, pp. 255-261.

A number of hospitals have agreed on a uniform layout for their annual reports. A suggested layout with three sections is given: general, medical and financial. The primary aim of the medical section is to supply the public with information on the quality of health. Its layout is printed in detail and deals with: (i) medical quality, which includes reports from committees on medical auditing, testing of treatments, cross-infection, other committees (such as co-ordination, prevention, 'near' accidents), discussion of patients, scientific research, extra-mural communications; and (ii) quantitative aspects which include polyclinics, emergency and first aid, clinical activity according to specialties, number of beds, diagnoses, index figures, departmental activities i.e. operating theatre, surgical specialties, anaesthetics, obstetrics, and other functions such as radiology, laboratories, physiotherapy, etc. The general section, printed briefly, deals with board, administration, staff and medical, para-medical and nurses' training. The financial section deals with the balance sheet, running costs and accountancy.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

See also Abstract Nos. 1118, 1177, 1216

1147. GIROUX, F. **A Canadian hospital security survey.** *Dimensions in Health Service*, Toronto, 1976, April, vol. 53, no. 4, pp. 8-10, 12.

Replies from 140 hospitals to a questionnaire on security showed that: (i) many of them were too small to support an internal security force at all; (ii) some, finding the internal system too expensive, used commercial security contractors; (iii) others, for financial reasons, had no system at all; and (iv) some used a combination of security staff and alarm systems. Security staff were shown to be doing much more than run car parks and check locked doors, including prevention of theft and vandalism, fire alarm and equipment surveillance and control, patient and visitor restraint, and reception

and discharge. Of the 39,560 security personnel in Canada, approximately 12.6 per cent were in hospitals. In the majority of hospitals an administrator, or his subordinate, was responsible for security; in others a professional security co-ordinator had been hired to direct either an internal or a private/commercial security force. The main security problems included thefts, drunks, too many entrances and exits, patient/visitor violence and vandalism. The need for specialized training in hospital techniques and procedures for both hired and internal security forces was emphasized.

OTHER SPECIAL ASPECTS

1148. GALVAGNI, W. **Planning facilitates moving two hospitals into one new center** *Hospitals*, Chicago, 1976, Feb. 16, vol. 50, no. 4, pp. 61-64.

The detailed planning required to enable the successful move of the 139-bed Children's Hospital and 307-bed Norton Memorial Infirmary into the 496-bed Louisville Medical Center teaching hospital complex [see Abstract No. 1090] is described. Preliminary discussions were initiated about two years before the actual move, each department head being made responsible for the detailed planning of his department's move. Overall responsibility was given to a moving officer assisted by an administrative committee, including administrators, the computer services director, the methods analyst, the director of finance and representatives of the commercial movers. Departmental moving co-ordinators and zone monitors were appointed to arrange packaging and advise the commercial movers on the positioning of rooms in the new hospital. A detailed written plan by each department head, produced some four months prior to the move and subject to final revision, proved invaluable as did a hospital equipment and furnishing inventory produced some six months before the move. The need for close co-operation with and accountability from the commercial movers is emphasized, also the importance of providing essential publicity about the move to hospital staff, boards of directors and the public at each stage of operations.

FINANCE AND ACCOUNTING

FINANCE

See also Abstract Nos. 1129, 1130, 1136, 1141

1149. **National health insurance: the debate lingers on.** *Hospitals*, Chicago, 1976, March 1, vol. 50, no. 5, pp. 45-53, 55-71, 73-75, 77-81.

Seven papers are presented on the development of a national health insurance scheme for the United States: the need for the expansion of Medicare; the progress of the National Health Insurance Bill through the Senate; new methods for re-designing the health care system; the case for a comprehensive health benefit plan; the case for a publicly funded scheme; the case for voluntary health insurance; and the political climate in which the debate on national health insurance is taking place.

HOSPITAL ACCOUNTING

See also Abstract No. 1153

1150. AMERICAN HOSPITAL ASSOCIATION. **Chart of accounts for hospitals.** (Financial Management Series) Chicago, American Hospital Association, 1976, viii, 157pp.

This volume is the latest revision of a manual first published in 1922 to establish a uniform system for the classification of accounts. Following the introduction there are chapters on: principles of accounting for hospitals; outline for the chart of accounts; balance sheet accounts; revenue and expense accounts; and uniform reporting.

SUPPLIES AND STORES

PURCHASING

1151. HOUSLEY, C. **Contract purchasing means a buyer's market.** *Dimensions in Health Service*, Toronto, 1976, April, vol. 53, no. 4, pp. 16, 19-20.

Nine myths about hospital purchasing are discussed: (i) hospitals are doing a good job in the area of purchasing; (ii) anyone can purchase; (iii) basically, purchasing is material management; (iv) the supplier dictates purchasing policy; (v) larger hospitals get better prices than smaller ones; (vi) competitive bidding is a good indicator of proper purchasing practices; (vii) hospitals should be in the supply and warehousing business; (viii) equal prices are relative for a particular item from several companies; and (ix) contract purchasing means lack of competition. A step by step analysis is then given to show the advantages/disadvantages of contract purchasing in economy of production of hospital forms. General advantages suggested include: (i) better total overall price negotiation and better service with preferential treatment in times of shortage due to the hospital being a large dollar volume customer; (ii) fewer back orders, supply quantities being assured through the contract's penalty clause; (iii) reduced inventory, fewer price increases, deliveries, invoices and so generally less paperwork; and (iv) contract purchasing does not necessarily advocate or require standardization. Prices will clearly increase in the future, the main question being by how much. Contract purchasing is recommended as a way for hospitals to get the most from their efforts to decrease or at least contain supply costs.

1152. HOLMGREN, J. H. **Hospitals buying less, leasing more.** *Modern Healthcare*, Chicago, 1976, March, vol. 5, no. 3, pp. 82, 84, 88.

A survey of hospital leasing in the United States indicates that it is greater than most hospital administrators realize. The results indicated that cash purchase is the most desirable method of buying moderately priced equipment and is also used when it is more appropriate to use the money for purchasing than to invest it. Eighty-three per cent of all hospitals surveyed had leasing arrangements, and large hospitals most consistently leased laboratory/diagnostic equipment since rapid obsolescence together with high costs made the equipment an unprofitable purchase. The chief reasons for

leasing are improvements in or maintenance of high quality care, cost containment and improvement in the credit and cash flow of hospitals. Methods of selecting the leasing companies are outlined, together with problems that have been encountered by hospitals in their leasing arrangements.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

1153. FILIP, W. Wirtschaftlichkeitsrechnung in der Grossküchenpraxis. **[Calculation of profitability in large-scale catering.]** *Krankenhaus Umschau*, Kulmbach, 1976, May, vol. 45, no. 5, pp. 353-354, 357.

Rationalization of large-scale catering services (including hospital catering) from the point of view of cost efficiency can have one of the following three aims: reduced costs with equal performance; improved performance without increase in costs; or (ideally) reduced costs and increased performance. The three main areas in catering are materials (including both foodstuffs and such items as cleaning materials), technical equipment, and staffing. Two other important items are energy and water. The interrelationship of all these factors and their effect on costs and efficiency are discussed. Mechanization and automation, as well as the use of convenience foods, are of value only if they maintain or improve the nutritional standard.

1154. KUNDSIN, R. B. and BODMAN, H. A. **Microbiology and hospital feeding systems.** *Journal of Milk and Food Technology*, Ames, 1976, March, vol. 39, no. 3, pp. 197-199.

The Peter Bent Brigham Hospital, Boston, Mass., is a teaching hospital where 63 to 68 per cent of patients are on modified diets; the menus for the remaining 32 to 37 per cent are recycled every three weeks. The hygienic environment recognized as essential for patient care areas is equally essential for food preparation areas. Food preparation for critically-ill patients requires not only selected house diets, but feeding in highly specialized ways e.g. by nasogastric tube. Examples of food service in intensive care units, clinical centres, and the renal unit are outlined. The risk of infection is emphasized. The philosophy of co-operation and collaboration between dietitians and microbiologists is outlined. Microbiologists should: (i) provide on-going education of all staff who handle food; (ii) collaborate with dietitians in random sampling of food and equipment; (iii) communicate with dietitians when concepts of microbial transmission change; and (iv) be available for questions concerning day to day microbiological problems associated with food service.

1155. HOLMGREEN, J. H. **Steps in planning save steps at meal time.** *Modern Healthcare*, Chicago, 1976, April, vol. 5, no. 4, pp. 64, 68.

This paper defines five major steps in planning and equipping a catering department and outlines the procedures and decisions in each. The steps are: (i) preparation of an outline description of the proposed department; (ii) allocation of space for the department proper and for ancillary support services, and preparation of a schematic

drawing; (iii) design development which fills in the details of the schematic drawing; (iv) preparation of documents for construction tendering; and (v) the construction phase which includes tendering for the purchase and installation of the food service equipment as well as for structural, mechanical and electrical work.

1156. RINKE, W. J. **Three major systems reviewed and evaluated.** *Hospitals*, Chicago, 1976, Feb. 16, vol. 50, no. 4, pp. 73-78.

Decentralized, centralized-bulk and centralized individual plating food service systems are described and their merits discussed. The last named system is generally favoured, but the problems of qualified and skilled labour shortage, low productivity and failure to provide patients with food at the proper temperature remain. Possible solutions under consideration include: (i) convenience foods procured off-premises; (ii) convenience foods produced on the premises; and (iii) automation. Limitations of (i) include the non-availability of some products, especially modified diets, lack of variety, lack of reliable information on nutrient contents, absence of federal specifications and the possibility of improper handling during transport and delivery. Advantages of (ii) include ability to obtain menu items needed, including complex diets, and flexibility in food planning and preparation. A combination of on-premise produced food and mechanized production, assembly, transport and distribution is recommended as most cost-effective. Various chilled, frozen and 'ready food' systems are also discussed and evaluated.

1157. TWEED, P. **Feeding geriatric patients: developing a cook-freeze system.** *Catering and Hotel Management*, London, 1976, April, vol. 48, no. 4, pp. 43, 45.

The cook/freeze system of feeding is being used for a study on feeding geriatric patients. Since portions and commodities can be permutated, ultimately presenting a wider choice for the patient, the method appears to be ideally suited to geriatric care. The cook/freeze system is realistic if installed in a hospital where the total number of recipients is sufficient to make it economically viable. It can also be used as a central point for meal distribution to homes for the elderly. Cook/freeze is not the only solution to individual patient feeding. The North West Regional Health Authority has implemented the Finesse Tray System of meal production where individual patient meal selections can be met at the preparation point. The advantages of the two systems are compared. An investigation into the merits of the system, compared with conventional systems, together with the possibility of integrating major aspects of each, is being carried out.

FOOD SERVICE

1158. Nieuw voedselverdeelsysteem in verpleegtehuis: minimum aan investering levert 'Den Ooiman' to Doetinchem maximum aan rendement op. **[The new food distribution system at 'Den Ooiman', Doetinchem, nursing home providing maximum profit at minimum cost.]** *Voeding en Huishoudgids voor Ziekenhuis en Instelling*, Amsterdam, 1976, May 3, vol. 43, no. 519, pp. 196-199, 203.

In this system, food is cooked one or two days in advance, placed into large covered dishes and transported on trolleys to the chilling department, where it is chilled down

to 2°C within two hours. Later, at a constant working temperature of 6°C and under supervision of the head cook, the meals are attractively portioned on plates according to patients' diets and wishes, labelled, and placed into lidded stainless steel drawers in specially designed, 108-meal storage trolleys. These are kept in cool-rooms. When required the meals are loaded on to smaller transport trolleys and wheeled to the ward kitchens, where they are heated in magnetronic ovens. This requires a few minutes of heating, one oven per 24 to 36 patients, and one nurse. The system has reduced a seven-day working week to a five-day week for a kitchen staff of seven, plus four hours at the week-end for one staff member. It required a minimum of investment, is time-saving in transit and efficient in use of cooking apparatus. The service to the patient of properly heated individual meals at the right time has improved. Washing-up is carried out centrally by one person who also takes care of meal transport and waste disposal. The paper includes 16 photographs.

HOSPITAL DOMESTIC MANAGEMENT

1159. BRANSON, J. C. and LENNOX, M. **Hotel, hostel and hospital housekeeping. 3rd edition.** London, Edward Arnold, 1976, vi, 288pp. £2.55

The management of the housekeeping department, particularly in some spheres has advanced rapidly in recent years and requires not only a knowledge of technical skills but also an understanding of the 'tools' of management. These aspects of housekeeping are explained in this book.

1160. DRUE, R. H. **Caveats for contracting.** *Modern Healthcare*, Chicago, 1976, April, vol. 5, no. 4, pp. 29-31.

In 1975 Memorial Hospital Medical Center, Long Beach, Calif., negotiated a housekeeping contract. Thinking that his experience would be of interest to others, the administrator concerned took very careful notes, on which this paper is based. The first meeting with the contractor's representative should be to evaluate his company; real negotiations begin at the second meeting. The contractor will have to do a survey of the hospital; this offers a further opportunity to evaluate his service. The whole process of negotiating and implementing a contract can take from a few weeks to six months or longer. This one took five months to negotiate, with the price quote being given about the middle of that period. Some questions that departmental heads and the hospital board are likely to ask are listed and answered. Some advice is also given on implementation of the contract. This hospital is now saving a substantial amount on contract services.

DOMESTIC WORK

1161. TAYLOR-BROWN, N. **Giving management information to domestic staff.** *Cleaning & Maintenance*, London, 1976, April, vol. 24, no. 4, pp. 64-66.

Rapidly changing technology in the hospital services, expanding numbers of staff in domestic services and the increasing physical area covered present problems in conveying information to staff. Information sources include: (i) the professional press; (ii) Department of Health and Social Security procedures; (iii) industrial organizations; (iv) colleagues; and (v) staff. The passing on of such information can be through

physical instruction and study days. A manual of standard procedures has been compiled to achieve effective communication and staff training in the Leicestershire Area Health Authority (T) East District. The manual is distributed to middle and line managers of the domestic services department and also to the senior members of administrative and nursing staff. It is in five sections: (i) administrative; (ii) supervision; (iii) staff training; (iv) fire and safety; and (v) control of infection—special procedures. Factors to be considered when making a decision are economy, suitability and new developments. The responsibility for training rests with the senior members of the department. There is a 'check' process or review of the training carried out, by a supervisor whose role cannot be stressed too much.

HYGIENE IN THE HOSPITAL

See Abstract Nos. 1104, 1154

HOSPITAL INFECTIONS

See also Abstract No. 1163

1162. HARECHMAK, J. R. **The relationship between hospital staff turnover and nosocomial infections.** (Health Care Research Series No. 21). Iowa City, University of Iowa, Graduate Program in Hospital and Health Administration, 1975, xviii, 196pp. $7.00

The purpose of this study was to explore the possible relationship which might exist between staff turnover and the occurrence of hospital infection. Following an introduction there are chapters on: the theoretical foundation of the study; previous research on the organizational consequences of turnover; a model linking turnover and organizational effectiveness; the research methodology; the empirical findings; and conclusions. It is concluded that, within the study hospital: (i) there appears to be a highly significant relationship between the high monthly total turnover of specific segments of the hospital's social system and the incidence of infection in the following month; (ii) the key variables seem to be extent of patient contact, the nature of the work activity, and the absence of professional education; and (iii) the total turnover measure, which attempts to capture the adjustment of both incoming and outgoing movement, appears to have free validity when used with the hospital infection variable.

SOURCES OF INFECTION

1163. ANDRIOLE, V. T. **Hospital acquired urinary infections and the indwelling catheter.** *Urologic Clinics of North America*, Philadelphia, 1975, Oct., vol. 2, no. 3, pp. 451-469.

Current techniques in the use of catheters in the urinary tract have been studied to determine their effectiveness in preventing the acquisition of bacteriuria in patients who had sterile urine at the time the indwelling catheter was inserted. The systems can be divided into three groups: (i) open systems—systemic antibiotics, antibacterial

bladder rinses and local antibiotics; (ii) sterile closed draining bags—non-valve and valve; and (iii) continued systems—sterile closed drainage with systemic antibiotics, antibacterial bladder rinses and local antibiotics. These systems are analysed. The possible effects of infection by Gram-negative rod bacteraemia are considered under three headings: clinical features; pathophysiology; and management of the syndrome. Antibiotic treatment and the possible side effects are outlined. The paper includes 45 references.

PREVENTION AND CONTROL

See also Abstract No. 1098, 1100

1164. BABCOCK, J. B. **Some practical problems and troubleshooting.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 133-134, 138-139.

The infection control officer must be aware of all potential areas of trouble that may arise where the hospital changes procedures, equipment or staff, or allows slackness to develop. Potential situations which need examining and analysing are outlined. 'Trouble-shooting' methods are described. In-service training is a valuable method of spreading information regarding the control and prevention of hospital infection. An epidemiological study of patients admitted to medical and surgical intensive care units highlighted the need for continued emphasis on hand washing to reduce the spread of infection. Current problems involve many antibiotic-resistant strains of organisms that were sensitive to antibiotics less than five years ago. The basis of a hospital infection scheme includes effective surveillance, analysis of data, and evaluation and awareness of potential or current problems.

1165. WESTWOOD, J. C. N., LEGACÉ, S. and MITCHELL, M. A. **Infection surveillance on a shoe-string budget.** *Dimensions in Health Service*, Toronto, 1976, April, vol. 53, no. 4, pp. 42-44.

The basic requirement is for a surveillance programme which is sufficiently efficient to detect the majority of infections, flexible and cheap to run. The punched card system used at Ottawa General Hospital for three years is described. Sources of information for detection are the admitting diagnosis, microbiology laboratory reports, the 24-hour nursing supervisor's report, contact with head nurses on specific ward infection problems, notification by doctors, and unit surveys. A punched card is made out for each patient admitted and a Kardex file card and a magnetic plaque for each infected patient. A monthly needle-sort analysis of punched cards is conducted for all patients discharged in the period to obtain retrospective information on the incidence of infection. For day-to-day infection control activity the Kardex cards are filed by ward and room for quick reference, and a similarly coded magnetic display board showing nursing units, wards, rooms and bed numbers is kept updated. Coded magnetic plaques are placed opposite the bed number for each infected patient. Disadvantages are the limitation of information obtainable from the size of punched card used and the tedium of needle sorting for large numbers of cards. The system is not therefore recommended for use in hospitals of over 600 beds. The system takes up some 100 hours of secretarial and 50 hours of nurses' time per month. The authors urge the equal importance of recording current infection states with retrospective analysis.

STERILIZATION

See Abstract No. 1182

SAFETY MEASURES

See Abstract No. 1104

FIRES AND FIRE PREVENTION

1166. BEEN, C. Brandbeveiliging in ziekenhuizen: koppeling aan technische dienst maakt brandpreventie levensgevaarlijk. **[Fire prevention in hospitals: linkage with the technical services makes the system risky.]** *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1976, May 11, pp. 252-253, 261.

Though a 24-hour watch on the buildings, hospital fire and evacuation teams and regular fire drills are desirable, they are not always practicable. Organization for fire prevention should integrate all services and primarily aim at ward safety. This includes regular checks on fire doors and waste bins, ensuring unobstructed passage for evacuation, purchase of non-flammable materials and installation of fire alarms. The fire organization in the Diaconate Hospital, Arnhem, consists during the day of two fire-fighting teams, two rescue teams, a technical service repair team and two first-aid groups. At night a porter operates from a communication centre which contains a general and nurse call system, radio, internal telephone exchange, a panel indicating the location of specialists, spare keys, fire-fighting plan, fire-fighting equipment and fire alarm. The porter calls the fire brigade and informs various hospital authorities. The five minutes between the alarm and the arrival of the fire engine are the test of fire prevention efficiency. Working according to a plan and knowledge of hospital layout are of crucial importance. Night evacuation teams consist of night nursing staff and on-call reinforcements.

PLANNING FOR MASS EMERGENCIES

1167. SAVAGE, P.E.A. **Disaster planning: protective clothing for medical teams.** *Injury*, Bristol, 1976, May, vol. 7, no. 4, pp. 286-287.

Details of protective clothing provided for the medical teams at Queen Mary's Hospital, Sidcup, Kent, are given. The clothing serves three functions: (i) to protect the wearer from damage; (ii) to offer protection to the wearer in bad weather; and (iii) to identify the wearer as a member of a medical team. A helmet, anorak, overtrousers, and overshoes are described. Details of the stockists and a list of references are included.

1168. MANNING, D. H. **Disaster technology: an annotated bibliography**, Oxford, Pergamon, 1976, [vi], 282pp. £9.00

This volume is in three parts: (i) abstracts, some lengthy, of the literature on disaster planning; (ii) a review of the literature; and (iii) an appendix containing abstracts of recent literature.

1169. THEORET, J. J. **Exercise London: a disaster exercise involving numerous casualties.** *Canadian Medical Association Journal*, Ottawa, 1976, April 17, vol. 114, no. 8, pp. 697-699.

A large-scale disaster exercise was conducted in London, Ont., to assess how one large community would handle the situation. The planning of a staged electrical fire aboard an aircraft and the 150 casualties resulting from the crash involved all the resource groups of the area and took more than a year. The use of a triage team to select patients before sending them to hospital prevented the overloading of hospitals and allowed each hospital to develop its own disaster plan. Criticism of the exercise included a lack of trained staff, poor communications and lack of co-ordination of the systems. These faults are now being corrected. It is the responsibility of every community to plan for possible disasters and to adapt them as the need changes. A new exercise will be carried out when all the problems have been resolved.

1170. NAGGAN, L. **Medical planning for disaster in Israel: evaluation of the military surgical experience in the October 1973 War, and implications for the organization of the civilian disaster services.** *Injury*, Bristol, 1976, May, vol. 7, no. 4, pp. 279-285.

Israel's experience of four wars and many mass casualty situations has led to the development of a plan for the management of mass casualties. Continuity of care is provided by manning every ambulance with a medical assistant, and every helicopter or aeroplane with a medical officer. At the field hospital triage and further treatment is carried out. The triage procedure distinguishes between: (i) those who are unfit, in spite of adequate resuscitation, to be evacuated any further; (ii) those who are fit, or who can be made fit after additional resuscitation, to be evacuated further; and (iii) the lightly wounded. The organization and management of casualties in the October war is discussed together with the implications for the organization of civilian disaster services. The importance of a smoothly functioning radio communication system is emphasized. together with the need for repeated training and exercises for staff. The concept of a triage centre should be considered when establishing a disaster plan to prevent overloading hospital emergency departments.

RADIATION HAZARDS

See Abstract No. 1195

THE PATIENT

1171. DROZDA, W. and SKINNER, H. B. **Patient administration services; organization for patient management.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. 32-33.

The Plains Health Centre, Regina, has attempted to solve the problems of lack of co-ordination between departments by establishing a single patient administrative services department (PASD) to organize directly the movement of patients and information in the centre. All procedures have been planned to: (i) provide a high quality of service for medical staff and patients; and (ii) promote the efficient use of hospital facilities and staff. The organization of work within the department is illustrated.

Special features included in the system are: (i) master patient index; (ii) multiple test administration centre manned seven days a week; (iii) master bed status control for appraising the bed situation; (iv) operating suite scheduling staff are now located in the registration office instead of in the operating suite; (v) out-patient, in-patient and emergency records are integrated and filed by patient number and problem; and (vi) staff from the PASD department are solely responsible for the admissions procedures for all patients. The advantages are: more flexibility; greater use of management skills; closer working relationship; less bureaucracy; and better use of staff and services. Although the PASD does not solve all problems it is more effective and more easily controlled than the traditional approach to patient processing.

WELFARE OF THE PATIENT

See also Abstract Nos. 1190, 1212

1172. HINKS, M. D. and THOMPSON, E. **Breaking the language barrier.** (King's Fund Project Paper No. 12) London, King's Fund Centre, 1976, 54pp. £0.50

This publication presents a collection of ideas and suggestions for overcoming communication difficulties experienced with overseas staff and patients whose comprehension of English is inadequate.

1173. BARTLETT, M. H. and MEYER, T. C. **Patients receive current, concise health information by telephone.** *Hospitals*, Chicago, 1976, Feb. 16, vol. 50, no. 4, pp. 79-80, 82.

The HEALTH-LINE patient information service was developed by the University of Wisconsin-Extension's department of medical education and the University's Center for Health Sciences, Madison, to increase the patients' understanding of health care and to support the health professionals' efforts by educating patients in certain problem areas. It consists of a library containing approximately 450 taped messages, four to five minutes long, in non-technical language obtainable by using the patient's bedside telephone. A consumer health education service also provides messages on preventive medicine, treatment of chronic health problems, child health, safety and emergency care, the messages being offered by a sponsoring organization which underwrites the cost of service and a HEALTH-LINE HIGHLIGHTS service giving public access to one high-interest health message each week. An evaluation study showed that at 31 December 1975, 52,750 calls had been received from patients in four Madison hospitals, and 258,173 calls on all Madison-based services combined. Patients said that the messages relieved their fears about forthcoming procedures and nurses that the service was useful in reinforcing information already given to their patients. An estimated budget for a 550-bed hospital to set up and maintain a HEALTH-LINE service for one year and for successive years is given in a table.

1174. LAFORET, E. G. **The fiction of informed consent.** *Journal of the American Medical Association*, Chicago, 1976, April 12, vol. 235, no. 15, pp. 1579-1585.

Informed patient consent is considered a legalistic fiction that destroys patient care and undermines confidence in institutions, professions and doctors in the United

States. It has generally been considered to have relevance in four areas of medicine: (i) therapeutic, in which the treatment is specifically aimed at the benefit of the patient; (ii) in a therapeutic field in which the procedure is directed exclusively to the benefit of another; (iii) in an experimental situation; and (iv) in permutations of all the previous applications. The legal and ethical aspects of treatment in all four applications are analysed. The need for the integrity of the doctor to be the most effective guarantee of patients' rights is paramount; informed patient consent merely strengthens the lack of confidence and trust between patient and doctor.

THE GENERAL PRACTITIONER AND HIS PATIENTS

See Abstract Nos. 1199, 1214

HOSPITAL CARE

See also Abstract Nos. 1102, 1109, 1119, 1140, 1181, 1204, 1208-1210, 1218, 1223, 1224

1175. MALLOY, J. L. **Taking exception to problem-oriented nursing care.** *American Journal of Nursing*, New York, 1976, April, vol. 76, no. 4, pp. 582-583.

The problem-oriented medical system (POMS) has influenced the entire structure of nursing care. However, there has been very little examination of the basis for the efficiency and improved communication which arises from an approach to patients focused on their problems. The disadvantages of POMS are: the tendency to fragment care, label individuals, focus on symptoms rather than prevention, and over-emphasize physical care. The SOAP method (subjective data, objective data, assessment and plan) is also used as a planning system and neglects the objective formulation stage. The whole POMS involves a system of patient care with certain implied attitudes, consequently nurses must carefully evaluate it in the light of their own aims. Important areas of patient care will be neglected unless nursing maintains its own contribution in the form of health objectives developed with the patient and his family, and based on nursing assessment and priorities.

1176. HALEVI, H. S. and RON, R. **Medical patient/nurse dependency in Israel.** *Journal of Advanced Nursing*, Oxford, 1976, Jan., vol. 1, no. 1, pp. 63-78.

Patients' needs for nursing care have been studied in the medical departments of university, central and peripheral hospitals in Israel. Their needs with regard to bathing, feeding, toilet and specialized treatment were analysed for the three types of hospitals. Differences were found not only among hospitals but between parallel departments of the same hospital. On average, for all departments, 54.4 per cent of the days spent in hospital were for self-care, ambulant patients, 32 per cent for intermediate patients and 13.6 per cent for highly dependent patients. A comparison with similar studies in New Zealand and Switzerland revealed that patients in medical departments in Israel are less dependent on nursing care than in the other countries. The reason for these differences may be in hospital policy, with more liberal admission for patients in Israel, or a difference in the assessment of patients and a more rigid evaluation of

nursing needs in New Zealand and Switzerland. The findings revealed that there are great differences among hospitals and departments in Israel in the quality of nursing care, and stress that the real needs of patients should serve as a basis for allocating staff not the proportion of bed numbers to staff. Part of the nursing staff should be 'floating' in order to direct them daily to different departments according to priorities.

1177. ANNAS, G. J. **The legal aspects of a patient care classification system.** *Hospital Medical Staff*, Chicago, 1976, Feb., vol. 5, no. 2, pp. 12-18.

The law and legal analysis of decision-making processes can play a positive role in promoting patients' rights without retarding potential medical advances. Any system of patient classification that determines treatment or non-treatment (see Abstract No. 1200) in an intensive care unit should make adequate provisions for the correct documentation, prediction criteria and patient representation. The more ill a person, the more willing he is to allow others to have unlimited control over his body, consequently the duty of the doctors and nursing staff to prevent a loss of autonomy and privacy is increased. No decision to terminate treatment should be made without the patient's consent. If any of the patient's rights are abused, or legal representation is not available, the patient may become compromised into making a decision against his will. A patient classification scheme loses all power of protection of patients' rights if treatment is provided without giving the patient adequate legal representation.

HOME CARE, AFTER-CARE

See also Abstract Nos. 1215, 1220, 1221

1178. BLAXTER, M. **'Hospital and community' now.** *Health Bulletin*, Edinburgh, 1976, May, vol. 34, no. 3, pp. 150-158.

An intensive survey was made of a pilot sample of 50 and a main sample of 194 patients, aged between 16 and 65 years, for a year after their discharge in 1972 from general medical, general surgery, neurology and orthopaedic surgery wards of the Aberdeen Royal Infirmary. Patients were interviewed regularly as were their families and health and welfare staff in contact with them. Studies of patient problems of practical care, housing and aids to daily living, employment, finance and social contacts showed that: (i) about one quarter perceived no problems; (ii) less than half of those with problems managed to solve them; (iii) the number of problems rose markedly between three and six months after discharge; (iv) multiple, nervous system and unclear diagnoses were the most unfavourable for readjustment; and (v) being labelled as disabled and/or dependent on officially provided 'welfare' services was regarded as a stigma, patients being more willing, for example, to take their benefit entitlement if it were on medical rather than social (poverty) grounds. Delays in assessment of and complications regarding insurance payments for industrial injuries also caused respectively, delays in rehabilitation and confused resentment. The patients in general appreciated the medical and health services provided, but the survey indicated that although services had expanded, many anomalies still existed as a result of fragmented administrative responsibility and the integration of 'hospital and community' had progressed little since earlier, similar studies were carried out in the fifties and sixties.

1179. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSINSTITUT. Hemsjukvård—idébeskrivning av framtida innehåll och former. **[Home medical care—future forms and contents].** (Spri rapport 2/76) Stockholm, Spri, 1976, 36pp.

This report presents the results of a project conducted jointly by the Federation of Swedish County Councils and Spri. Its purpose was to describe the contents of and forms for home care and thereby provide a basis for a continued debate on the subject. After defining home care and its purpose, the report considers patient categories, home care as a part of primary care, organization and work forms, cash allowances for home care, co-operation of the patients' family, charges and benefits, and division of responsibilities and co-operation between home care and social services. [This abstract has been prepared from an English summary of the report.]

SPECIAL DEPARTMENTS

WARDS

See also Abstract Nos. 1094, 1102

1180. HICKS, D. **The management of 120-bed clinical nursing units: an account of research carried out in the five years 1970-1974.** Winchester, Wessex Regional Health Authority, 1976, 806pp.

In 1965 the Wessex Regional Hospital Board decided to adopt a policy of 120-bed clinical nursing units for the main specialties in the new district general hospitals at Southampton, Basingstoke and Portsmouth. This is a report on the five-year programme of research directed towards establishing practical solutions to the problems of managing these large nursing units. It covered many aspects of unit management and throughout, in addition to the theoretical approach, attached great importance to the need to involve users in every stage of the development and testing of new systems. Tables, diagrams and a list of 151 references to the literature are included.

OPERATING SUITES

See also Abstract No. 1093

1181. RINNEARD, B. **Patient care auditing in the O.R. suite.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. S12-S13.

The standards of nursing care in operating suites should incorporate all the current schemes carried out in the hospital e.g. pre- and post-operative visiting, pre-operative nursing assessments, involvement with nursing, medical histories, nursing care plan, and charting and recording. Established policies and procedures should also be considered. An auditing scheme can only be measured against known standards, and when these have been established an audit form can be drawn up. The form will be brief and concise since it evaluates the nursing care that has been provided not the nurse's performance. A sample audit form is reproduced.

ANAESTHESIA

1182. PRATT, D. E. **Centralized processing and supply of anaesthetic equipment.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. S10-S11, S13.

Belleville (Ont.) General Hospital has incorporated the 'Friesen concept' into its reconstruction programme and has centralized many of the medical and support services. The responsibility for anaesthetic equipment originally rested with the individual departments, but this proved unacceptable because: (i) professional staff were used to process the equipment when they could be used in other departments; (ii) floor space in the operating rooms and support areas was usually at a premium; (iii) sterilizing procedures were usually by the use of solutions resulting in very poor drying of the equipment; and (iv) inspection and checking was usually visual. Centralized processing of anaesthetic equipment has resulted in: standardization of equipment; greater infection control; higher standards of equipment control; quality control; improved cleanliness; and the development of approved procedures and techniques. An exchange supply system for the departments from the central area has been developed, with the shortest turn around time and the minimum amount of additional supplies. A list of the equipment and details of the procedures for supplying the seven operating rooms is given. Centralization of anaesthetic supplies has proved successful at Belleville General Hospital and is recommended for others.

PHARMACY

1183. STOLAR, M. H. **National survey of selected hospital pharmacy practices.** *American Journal of Hospital Pharmacy*, Washington, 1976, March, vol. 33, no. 3, pp. 225-230.

A questionnaire on the incidence of 10 selected hospital pharmacy programmes was completed by 559 (75.7 per cent) of 738 short-stay hospitals to which it was sent. Of the respondent pharmacies 41 per cent belonged to a group purchasing plan; 67 per cent reported that pharmacists had authority to select the source of supply for all drug orders unless noted otherwise by the prescriber; less than 10 per cent had both complete unit dose drug distribution and intravenous admixture programmes and an additional 10 per cent had partial programmes; 17 per cent of those in large hospitals were open 24 hours a day; 13 per cent of those in large hospitals and five per cent of those in small hospitals used computer-assisted medication dispensing. Total pharmacy purchases for all short-term hospitals in 1974 were estimated to be 1.5 billion dollars.

1184. DAVIES, D. M. **Clinical pharmacology in a district general hospital.** *Lancet*, London, 1976, May 15, vol. i, pp. 1063-1064.

Shotley Bridge General Hospital, Consett, has been involved with clinical pharmacology schemes for the past 10 years. Many of the activities recommended in the Royal College of Physicians' report on clinical pharmacology have already been implemented. A drug information service on adverse reactions is regularly used by doctors. New prescription sheets and prescribing procedures have been designed and tested. Adverse drug reaction monitoring has been instituted with three aims in view: research, arousal of concern about drug toxicity and 'therapeutic audit'. Community

monitoring schemes have been established together with intensive hospital monitoring and simple hospital monitoring. Research trials and lectures on drug therapy and toxicology have been given to doctors, nursing staff, and administrators. The experience at Shotley Bridge suggests that if a physician with a special interest in clinical pharmacology (PCP) is to carry out all the duties expected of him as recommended in the report, he will need more assistance than is usually available to consultant physicians at a district general hospital. The projects will involve much demonstration and clinical support, and will also need a trained nurse and the help of a registrar. It is suggested that a formal attachment of the PCP to the nearest university department of clinical pharmacology would be of mutual benefit.

1185. NEDERLANDSE VERENIGING VAN ZIEKENHUISAPOTHEKERS. Ontwikkelingen in de ziekenhuisfarmacie: nota betreffende de huidige en de toekomstige beroepsuitoefening van de ziekenhuisapothekers in Nederland. **[Developments in hospital pharmacy: note concerning the present and future professional position of the hospital pharmacists in the Netherlands.]** Harmelen, Nederlandse Vereniging van Ziekenhuisapothekers, 1976, 8pp.

Since 1958 a Dutch hospital of 300 beds or more must by law have its own pharmacist on the premises. His duties cover: (i) pharmaceutical service, i.e., purchasing, stocking, preparation, laboratory research, distribution and assisting therapy; (ii) development and research, i.e. preparation of instructions, packaging, keeping qualities of drugs, methods of analysis and its appropriate apparatus; (iii) management, which includes organization of work and staff, legislation, costs, documentation, administrative responsibilities and staff management; and (iv) other tasks such as 'education' of own staff, training, membership of committees, publicity, research on request and co-operation with other services. General expansion in the field of medicine has increased the pharmacist's work load. To solve this problem more training should be encouraged. Conclusions and recommendations are: (i) for optimal functioning a pharmacy should be in the hospital, have the maximum of facilities and be manned by at least two pharmacists; (ii) if these requirements cannot be met, some form of co-operation between regional hospitals should be arranged; (iii) the criterion of 300 beds should be altered and the type of hospital, number of specialties, etc., be taken into account; (iv) the concept 'prescription' should be reviewed; and (v) the organization of the distribution of medicines should be the responsibility of the hospital pharmacist.

1186. RUCKER, T. D. **Drug information for prescribers and dispensers: toward a model system.** *Medical Care*, Philadelphia, 1976, Feb., vol. 14, no. 2, pp. 156-165.

It is estimated that 1.4 billion new drug orders are initiated annually by health care professionals in the United States. The present system of persuasive information and drug education provision by pharmaceutical firms, whether directly or indirectly, is rejected as doing little to provide complete drug data. Other systems are suggested and evaluated with regard to their possible possession of greater therapeutic and economic advantages for patients. The first accepts the general principle that pharmaceutical manufacturers should continue in their promotional activities and certification of their salesmen. The second involves the establishment of a National Drug Education Foundation to provide objective drug information and education through therapeutic consultants, regional centres and professional journals and schools. The Foundation's operations are estimated as likely to cost about one-seventh of current commercial

expenditure and expected results of its establishment would include reduced commercial marketing costs and product prices and increased funds for research and health care provision. Details of commercial and likely Foundation expenditure are given in an appendix and a table.

1187. McCormick, W. C. and Neff, L. E. **A method of documenting drug-related problems to improve pharmacy service.** *Hospital Pharmacy*, Philadelphia, 1976, March, vol. 11, no. 3, pp. 114-116, 118-119.

Sunland Center, Gainesville, Fla., established a 'problems log' to provide information on health care and help pharmacists improve pharmaceutical services. The problems log was maintained as time permitted, and was not a record of the total number of problems encountered, nor a statistical sample of the problems. It documented some of the problems which arose during a particular period in time. A total of 108 problems involving 102 patients were listed in the log; 59 per cent were related to therapy and 41 per cent to distribution. The findings revealed that the frequency and seriousness of therapy-related problems were as great as for distribution-related problems. A new drug distribution system has been implemented at the Sunland Center to prevent distribution errors. The log has helped the pharmacists to develop their ability to deal with professional problems. Information from the problems log has been useful in negotiating for further development of the pharmacy service scheme. The log provides a useful data base from which the documentation of budgetary needs and expanded clinical services can be developed.

1188. Whiting, B. and Goldberg, A. **The drug disc: a drug interaction warning system United Kingdom trial and subsequent development.** *Health Bulletin*, Edinburgh, 1976, May, vol. 34, no. 3, pp. 167-171.

Multiple drug therapy and self-prescription of drugs demand from doctors and pharmacists a critical attitude towards drug combinations and a greater awareness of their associated problems. A drug disc system has been developed to provide clinically relevant information in a concise and convenient format which can be referred to by the physician whenever therapy is prescribed. In an evaluation study 450 copies of the disc were sent to 450 doctors and pharmacists with an explanatory letter and questionnaire followed by two further questionnaires to ensure as full a response as possible. The majority of participants considered its design satisfactory though perhaps slightly too large. The information given was thought relevant to clinical practice and useful or very useful by 82 per cent. The 18 per cent thinking it of little use were mainly paediatricians, obstetricians and anaesthetists, whose practice dictated the use of a somewhat specialized range of drugs; 43 per cent reported some resulting modification of drug administration and 80 per cent thought it would have some value in teaching. The final design of the disc, based on the trial results, showed: (i) clinically significant interactions; (ii) interactions of uncertain clinical significance; and (iii) potentially serious interactions.

1189. Brodie, D. C. and Smith, W. E. **Constructing a conceptual model of drug utilization review.** *Hospitals*, Chicago, 1976, March 16, vol. 50, no. 6, pp. 143-144, 146, 148, 150.

A conceptual basis for drug utilization review (DUR) in health care is outlined. Previous drug utilization reviews have failed to develop the basic concepts of the DUR,

and have not related drug use to the use of other services, particularly medical services. A conceptual model for DUR can be established around five utilization review principles: authority; operational and demographic characteristics of the delivery area and the population; knowledge of the existing patterns of use; comparison of use with local standards; and evaluation of the impact of reviews on utilization patterns. Each of the principles is analysed. Evaluation should be centred upon three categories: (i) changes in drug use and costs; (ii) changes in the quality of patient care; and (iii) changes in the cost of patient care. A conceptual model based on these principles has been produced and a structual outline for operational models identified. The conceptual model cannot be as easily adapted to non-institutionalized ambulatory care as it is to organized settings, since: (i) there is no available patient record similar to the patient chart; (ii) lack of universality in maintaining patient drug profiles by pharmacists; (iii) families often use several doctors at the same time for prescriptions; and (iv) there is no common technical language or standardized information collecting system. DUR should be linked with the quality of care issue, bringing both pharmacists and doctors together to solve the problems and reduce unnecessary costs for health care. The development of the relationship between drugs and care will depend upon advances in the state of the art in assessing the quality of health and medical care.

1190. NAMIKAS, E. and others. **Drug counselling with the aid of a drug education monograph.** *Hospital Pharmacy*, Philadelphia, 1976, March, vol. 11, no. 3, pp. 91-92, 95-96.

Drug counselling for patients at the Veterans Administration Outpatient Clinic (VAOC), Los Angeles, Calif., has been improved by a Drug Education Monograph (DEM). The pharmacists' verbal instructions are combined with the DEM which contains three types of information: (i) general comments on what the drug is used for and/or how it works; (ii) instructions to the patient on how and when to take the drug with possible adverse food/drug or drug/drug reactions to avoid; and (iii) warnings and cautions, possible side effects and advice on activities the patient may or may not engage in. The DEMs are written using common language with the least possible medical jargon. They are short and concise for easy reading. DEMs are the responsibility of the pharmacist who updates and adds new information as required. The DEMs are prefolded and attached by a gummed label to the appropriate medication bottle. They are tailored to meet the needs of the out-patient clinic. The seven drug categories for which DEMs have been produced are: antibiotics; narcotic analgesics; digitalis preparations; sedative/hypnotics; antihypertensives; minor tranquilizers; and antihistamines. Examples are given of each of the DEMs. This reinforcement of the pharmacists' instructions helps improve drug compliance and prevent drug reactions and interactions.

LABORATORIES

1191. BRAIN, M. C. and others. **The Hamilton district program in laboratory medicine: a progress report on integration.** *Canadian Medical Association Journal*, Ottawa, 1976, April 17, vol. 114, no. 8, pp. 721-722, 725-726.

The co-operative development of an integrated, comprehensive, cost-effective, non-profit laboratory plan sponsored by the Ontario Ministry of Health, the five general hospitals in Hamilton, McMaster University Faculty of Health Sciences and

the Hamilton-Wentworth District Health Council is described. Integration of laboratory services has resulted in the adoption of uniform values for tests and rational use of professional and technical resources and equipment. The organization of the laboratory service is outlined. A community laboratory service which links all laboratory services also collects specimens from patients in their homes and nursing homes, and a laboratory reference centre maintains complete patient index files and monitors the receipt and results of specimens. There is a great interest in education and research. Difficulties facing further expansion of the laboratory services can be directly attributed to the method of funding by the Ontario Government. The impact of the closure of many hospital beds will increase the demand for out-patient diagnostic services. Lessons to be learnt from the Hamilton system are: (i) regionalization has reduced laboratory costs while increasing the range of services; (ii) the primary aim is to integrate all aspects of service, education and research; (iii) the quality of laboratory medicine is maintained; (iv) new methods are developed and cost savings passed on to the public; and (v) the Ontario Ministry of Health will have to change the funding methods so that the cost of services is met by a realistic level of support for the hospitals and laboratories.

1192. HABER, S. L. and others. **The agony and the ecstasy of computerizing a clinical laboratory.** *Pathology Annual*, New York, 1975, vol. 10, pp. 461-488.

The first decision a pathologist should make when he considers whether to computerize an already automated clinical laboratory is whether he wishes to install a system in which the vendor supplies both the hardware and software, or whether he just wishes to purchase the hardware and develop the software himself. The Kaiser-Permanante Medical Center, Santa Clara, Calif., provides both in-patient and out-patient work and the clinical laboratory performs approximately 1.5 million tests per year. To evaluate the potential suppliers of computers and their wares a questionnaire was drawn up covering: background and history; hardware and equipment; finance and contract terms; training and support; software and programming; acceptance of data and reporting of results; and organization and management of laboratory work and reports. Based on the initial response to the questionnaire each company was sent a more formal request for proposal (RPF). The ground rules, response format, contract terms, operating environment and overall system requirements, together with specific requirements by each laboratory section within the hospital are outlined. After evaluating the RPF a more accurate competitive bid from each vendor is required. Evaluation of the package must be carried out slowly, with care. Finally prices and contract terms are negotiated with the chosen vendor, with guaranteed maintenance clauses written into the contract. The financial aspects of the contracts should be considered outside the work of the pathologists.

1193. RAIMONDI, D. L. and others. **LABS/7—a distributed real-time operating system.** *IBM Systems Journal*, Armonk, N.Y., 1976, vol. 15, no. 1, pp. 81-101.

A laboratory applications based system that demonstrates the feasibility and practicality of a hierarchical set of computers for real-time, event-driven applications is described. LABS/7 provides facilities for attaching multiple IBM System/7s to a host System/360 or System/370. The system is operational in a wide variety of environments, including research, development and clinical medicine and has generally been well

received. It demonstrates an effective way of sharing a process control computer among several independent applications. The system's objectives are outlined together with an overview of the system, the hardware and software. The timing and responsiveness of the system are limited only by the hardware. User isolation has proved to be good and resource conflicts among applications have proved to be few and easy to resolve.

1194. CHALLAND, G. S. and MCLARTY, D. G. **The impact of a new test on two district hospitals—a managerial analysis on the introduction of an improved assay.** *Health Bulletin*, Edinburgh, 1976, May, vol. 34, no. 3, pp. 141-144.

When an improved test is introduced, changes in the laboratory work load are influenced by the time clinicians take to become aware of it, the proportion of abnormalities it reveals, and ease of access by clinicians to the laboratory. A study was carried out over an 18-month periodin two large, neighbouring district general hospitals when the new radioimmunoassay for thyroxine (T_4) was made available in addition to the long-established protein-bound iodine assay (PBI). PBI requests fell from 300 to 150 and T_4 rose to about 125 weekly, the total for both tests remaining about equal to the original PBI work load. Even 18 months after the new test was introduced, over half of the clinicians asked for the old one. Abnormal results increased, but more slowly than the work load; the incidence of abnormality revealed changed with time and the work load at both hospitals. The difference between the two hospitals in the proportion of abnormal results could be explained by the presence of a well-established thyroid clinic at one hospital, or the existence of a more liberal selection procedure resulting from easier access to the test at the other hospital. The financial advisability of withdrawing an old test completely when a new one is introduced is noted.

DIAGNOSTIC X-RAY DEPARTMENT

1195. KAN, K. and others. **Exposure of radiologists to scattered radiation during radiodiagnostic examinations.** *Radiology*, Syracuse, N.Y., 1976, May, vol. 119, no. 2, pp. 455-457.

The exposure to scattered radiation resulting from both fluoroscopy and radiography was measured on both hands, the forehead and gonads of six radiologists by means of thermoluminescent dosimeters in two fluoroscopy rooms. The following information was recorded during the diagnostic examinations: duration of fluoroscopy, kV during fluoroscopy, the number of radiographs, film size and the kV value during exposures. The results indicated that: (i) exposure of the forehead does not exceed one per cent of the maximal permissible exposure; (ii) palpation during examination of the stomach is acceptable if the hand is protected by a lead glove; (iii) exposure of the right hand during examination of the colon was higher, since the radiologist's method influences the exposure and the use of lead gloves is recommended; (iv) a lead apron provides appropriate protection of the gonads during normal radiodiagnostic procedures; and (v) reliable exposure measurements can be achieved by means of thermoluminescent dosimetry, even at very low exposure levels.

REHABILITATION

See Abstract No. 1196

OCCUPATIONAL THERAPY DEPARTMENT

1196. IBBOTSON, J. **Rehabilitation workshop.** *British Journal of Occupational Therapy*, London, 1976, April, vol. 39, no. 4, pp. 93-97.

The Rehabilitation Workshop at Odstock Hospital, Salisbury, was begun as part of an integrated rehabilitation scheme, to provide assessment of the ability to work and to extend treatment in a working atmosphere. The work carried out in the workshop varies according to availability and demand. Crutches and walking rockers are produced for the supplies department of local hospitals, wine crates and steps are made for sale to individuals, and a range of 'one-off' jobs is also carried out. Engineering jobs are carried out on a centre lathe, fly-presses and milling machines. The majority of patients attend for a full day divided into six sessions. The accent is upon productive industrial activities; specific treatment machines have been kept to the minimum, whilst industrial machines have been adapted to give the required remedial treatment. Various programmes of treatment have been developed and these have been co-ordinated with graded workshop activities. Job descriptions of the work of the occupational therapist and the manager are outlined. Rapid patient turnover means good channels of communication are needed through informal and formal meetings. Treatment programmes for patients are included.

DEPARTMENTS FOR SPECIAL THERAPY

1197. LEONHARTSBERGER, J. von, HEISER, A. and LEITGEB, H. Die systematische Erfassung und computermässige Bearbeitung von Diabetikerdaten in einer Stoffwechselambulanz. **[Systematic, computerized processing of diabetic data in a metabolism clinic.]** *Wiener medizinische Wochenschrift*, Wien, 1976, April 23, vol. 126, nos. 16/17, pp. 217-219.

The electronic data processing system described has been in use for a year and a half at a Salzburg hospital and concerns out-patients attending a metabolism clinic (almost all of whom are diabetics). The clinic looks after about 2,200 patients who attend for checks at regular intervals at the rate of 35 to 50 a day. The data provided includes: basic patient data; diabetes history; laboratory values for regular checks; diagnosis in accordance with the WHO scheme; previous treatment; treatment and diet recommendations; date of next check; and printout of doctor's letters and documentation. The paper reproduces a specimen punched card (one of which is made out every day for each patient attending the clinic).

1198. PETITOT, H. Le centre d'hémodialyse d'Ardenne. **[Ardennes haemodialysis centre.]** *Techniques Hospitalières*, Paris, 1976, April, vol. 31, no. 367, pp. 54-56.

A haemodialysis centre for the Ardennes has been established in Charleville-Mézières Hospital and it is hoped that all those patients who previously had to travel for treatment to Paris, Lille, or Reims will be treated here. The centre has four Rhodial 75 closed-circuit dialysis generators and five Mark II open-circuit generators, one P.D. 700 peritoneal dialysis generator, and equipment for making haemodialysis concentrate and demineralizing water. At present the centre operates for three days each week, but eventually it will be open for three nights as well so that 20 patients instead of the present 14 can receive regular treatment. A plan of the new centre and a photograph are included in the description.

1199. HILL, R. D. **Community care service for diabetics in the Poole area.** *British Medical Journal*, London, 1976, May 8, vol. i, pp. 1137-1139.

Because of an increasing work load in the diabetic clinic at Poole General Hospital, general practitioners were asked to help in a community care service for diabetics. In this, general practitioners typically care for non-ketotic patients with maturity onset diabetes who are well controlled on diet or diet and oral hypoglycaemic agents, while the clinic concentrates on more difficult cases and screens patients for long-term complications. The hospital laboratory's work load has been eased because patients may attend for two-hour interval blood sugar estimations when they like; most patients appreciate this flexibility and prefer being looked after by their own doctor. The service has not increased the general practitioner's work load unduly, but it has heightened their awareness of diabetes in the community, thus allowing the diabetic consultant to deal with the problems for which he has been trained. The service has thus provided improved care for all diabetics in the Poole area.

INTENSIVE CARE UNITS

1200. TAGGE, G. F. **Critical care: a classification system for ICU patients.** *Hospital Medical Staff*, Chicago, 1976, Feb., vol. 5, no. 2, pp. 1-6.

Mount Sinai Hospital, New York, has developed a patient care classification system for use in its intensive care unit. The aim of the system is to limit the treatment to be given to a critically ill patient with the prognosis for his survival. The system can: (i) force a conscious decision as to the treatment to be given; (ii) encourage communication; (iii) prevent confusion among the intensive care nursing staff; (iv) encourage the development of a treatment plan; (v) minimize medico-legal risks; (vi) dignify the intensive care system for the patient and family; and (vii) guarantee re-assessment of each patient with regard to the aims of the treatment and determine when the treatment should be stopped. The system is based upon four categories of treatment: (i) maximum therapeutic effort; (ii) maximum therapeutic effort with a re-evaluation of the patient at a specific point in time; (iii) no new therapy (transfusion, antibiotics) is to be given; and (iv) all therapy will be stopped and life support assistance will cease. The classification of a patient should be based on ethical, religious, technological, economic, legal and psychosocial grounds as well as medical. The more formal the classification and the greater the staff participation the more likely the decision will be the correct one.

1201. CULLEN, D. J. and others. **Survival, hospitalization charges and follow-up results in critically ill patients.** *New England Journal of Medicine*, Boston, Mass., 1976, April 29, vol. 294, no. 18, pp. 982-987.

The survival, quality of life, hospital charges and consumption of blood and blood products were studied in 226 critically ill primarily post-operative patients in Massachusetts General Hospital, Boston. The patients all required intensive care. After one month of treatment 123 patients had died (53 per cent), 70 were still in hospital and only one of the 103 survivors had fully recovered. After 12 months, 164 patients (73 per cent) had died, 10 were still in hospital and 51 were at home. Twenty-seven out of 62 survivors had fully recovered. Charges were on average $14,304 per patient, and the total cost of blood and blood fractions was $617,710, 21 per cent of the total hospital charges. The results emphasize the use of highly

limited resources for a restricted group of patients. Indirect benefits are received by the less critically ill patients since lessons learnt from critically ill patients are rapidly applied to the less ill, thereby reducing hospital stay. The increasing costs of providing intensive care will ultimately become self-limiting, however it is believed that once a patient is accepted for intensive care, cost restraints should not compromise any attempts at providing the best care available. Cost control can be achieved: (i) by not accepting patients for whom intensive care is inappropriate; and (ii) discontinuing intensive care for those patients who are unlikely to survive. Standard terminology for critical illnesses is necessary in order to allow comparison between intensive care units and to share medical experiences. It is up to the medical profession to decide how to make best use of these limited resources.

1202. TAYLOR, D. E. M. **Human and computer assisted measurement and diagnosis in an intensive care unit.** *Health Bulletin*, Edinburgh, 1976, May, vol. 34, no. 3, pp. 180-182.

Two parallel studies on the reliability and accuracy of nurse observations and ward monitors and the use of probability theory in computer assisted monitoring to develop a patient automatic warning system (PAWS) were carried out in the intensive care unit of the Cardiothoracic Surgical Unit, Edinburgh Royal Infirmary. On clinical assessment there were 35 episodes which should have been detected during 390 hours of monitoring. The standard ward monitor identified 18 of these, but 409 false alarms would not have been obvious immediately due to a monitor fault. The PAWS unit correctly identified 19 incidents and only registered six false alarms. The reduction in false positives is a major step in improving automated alarm systems. It was also concluded that: (i) a small bedside hybrid computer could perform as well as a much larger digital machine; and (ii) chart keeping by nurses was much more complex than was supposed, and earlier attempts at computer assisted monitoring took too simplistic a view of the process of observation and diagnosis in the acutely ill patient in an intensive care unit.

1203. FRIEDEN, J. and COOPER, J. A. **The role of the intermediate cardiac care unit.** *Journal of the American Medical Association*, Chicago, 1976, Feb. 23, vol. 235, no. 8, pp. 816-818.

As an alternative to the direct transfer of patients from the cardiac care unit (CCU) to general medical wards with inadequate or non-existent monitoring facilities, a 22-bed intermediate unit (ICCU), subdivided into 'acute' and 'subacute' areas containing bedside and central station monitoring, was constructed at the Montefiore Hospital and Medical Center, New York, in 1973. The subacute area used radiotelemetry to allow early ambulation. After 10 to 12 days patients were transferred, depending on their condition, to a convalescent centre with emergency house staff coverage or to the general medical wards. A one-year study of the new system showed: (i) a progressive reduction in hospital costs from the CCU to the ICCU to the convalescent unit; (ii) improved patient care by nurses rotating between the CCU and ICCU and thus gaining more experience and through continuity of medical care in the CCU and later the ICCU; (iii) earlier monitored ambulation followed by a reduced hospital stay; and (iv) a slightly longer stay in the less costly convalescent unit, depending on the age and family position of the patient. The introduction of the ICCU reduced the pressure for additional beds in the CCU without impairing patient care, patients being also transferred to it directly from the emergency unit or the general medical wards.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See also Abstract Nos. 1119, 1142, 1190, 1197

1204. LEWIS, C. E. and CHEYOVICH, T. K. **The clinical trial as a means for organizational change: report of a case study.** *Medical Care*, Philadelphia, 1976, Feb., vol. 14, no. 2, pp. 137-145.

The main purpose of this research study was to examine the acceptance of nurse practitioners by medical staff. The medical staff of a Veterans Administration out-patient clinic were initially asked whether they would be willing to participate in the training and supervision of nurse practitioners; the question was repeated 14 months later after a trial had been completed. Over 70 per cent initially opposed the concept of non-medical care, but on re-interview a high proportion favoured acceptance. Both medical staff and the two nurses becoming practitioners evaluated patients for acceptability for nurse practitioner care and re-evaluated them one year later. Patients agreeing to participate were grouped according to age, race, medical problem and referring doctor and randomly assigned to experimental and control groups. The nurses accepted and doctor delegated for care a higher proportion of non-white employed patients with less than high school education, over 55 years old, both initially and after re-evaluation. The decision on re-evaluation was mainly based on the patients' medical problem. Positions were created for nurse practitioners on the staff of the clinic at the end of the experiment. Details of the study are given in a chart and four tables.

CASUALTY AND ACCIDENT

1205. PEARSON, D. A., BERNACKI, E. J. and MEIGS, J. W. **An emergency medical care facility: program characteristics and patient attributes.** *Journal of the American College of Emergency Physicians*, East Lansing, Mich., 1976, March, vol. 5, no. 3, pp. 174-179.

A study was carried out to determine the structure and character of an emergency medical care centre which is a satellite clinic of a community hospital, to describe the types of illness treated and to characterize the patients who use the centre. Information was obtained from 461 patients who visited the Shoreline Clinic, Middlesex Memorial Hospital, Essex, Conn. The results indicated that half of the patients were treated for traumatic conditions. This confirms earlier studies which indicated that emergency medical care centres are expected to treat more traumatic conditions, since patients appear to be more likely to chose this type of centre for their treatment. The Shoreline Clinic appears to provide a much needed service to the population of the area. Many of the patients claimed to have a private doctor, but due to the shortage of doctors in the area the clinic is a source of treatment when a doctor is not available. The study revealed that an ambulatory care centre is of benefit in areas where distances to hospitals are great, and the support provided by the clinic may be a significant factor in attracting new doctors to the area. The centre may also alleviate much of the inappropriate use made of hospital emergency services.

1206. HOFFER, E. P. and BARNETT, G. O. **Computer-aided-instruction in the emergency department.** *Journal of the American College of Emergency Physicians*, East Lansing, Mich., 1976, March, vol. 5, no. 3, pp. 180-183.

Computer-aided instruction (CAI) offers a number of possibilities for the casualty doctor, and the Massachusetts General Hospital Laboratory of Computer Science created a library of CAI programs in 1972. An experimental network of CAI programs was set up operating on commercial telephone lines. Programs were developed by Massachusetts General Hospital, Ohio State University and the University of Illinois Medical College. Users in 36 cities could be connected by telephone to the computers of the contracting institutions. During the first two years over 80 institutions participated. National Library of Medicine support has now been withdrawn and the network is now wholly supported by the users. A trial of the Massachusetts General programs, in conjunction with the Continuing Education Committee of the American College of Emergency Physicians, was carried out in five representative community hospitals. Each hospital had to obtain a terminal and pay the telephone charges to the nearest telephone entry point on the network. Results of the study showed that 30 per cent of the casualty doctors in the target population followed 10 or more programs. The programs were given a favourable rating. The pilot project has demonstrated that CAI is a useful education tool and an expended trial of the programs will be the next step in the evaluation of the use of CAI.

1207. JONAS, S. and others. **Monitoring utilization of a municipal hospital emergency department.** *Hospital Topics*, Chicago, 1976, Jan./Feb., vol. 54, no. 1, pp. 43-48.

A pilot study was carried out at the Morrisania City Hospital, Bronx, N.Y., to establish whether the information on existing medical records used in the emergency departments could be used for planning and organizing the hospital emergency services, and to collect data on patient use and patient characteristics. A sample of 678 patients were studied for demography, transport, use of services, and urgency of the case, and cross-tabulations were drawn up. The results indicated that much information can be derived from the records for use in rational planning of hospital services and for improving patient flow and quality of care. The paper includes tables of results.

1208. FLETCHER, S. W. and HAMANN, C. **Emergency room management of patients with sore throats in a teaching hospital: influence of non-physician factors.** *Journal of Community Health*, New York, 1976, vol. 1, no. 3, pp. 196-204.

The care of patients with sore throats was evaluated to determine whether the quality of care received is associated with the degree of control doctors have over the medical care system, or whether the quality of care is influenced by factors related to the hospital support services or the patients themselves. A review of the medical records and diagnostic evaluation of 169 patients with sore throats presenting themselves at the emergency room of the Baltimore City Hospitals revealed that the diagnosis was adequate in 78 per cent to 98 per cent of the patients. Treatment was adequate for 62 per cent of the patients; however, in only one of the 67 patients treated with antibiotics was the culture result known before treatment. The bacteriology laboratory processed the cultures slowly, and there was no method of ensuring that doctors who ordered laboratory tests received the results of the tests, consequently doctors did not have enough information upon which to base their decisions. If throat cultures are to be

used in the treatment of patients a well co-ordinated service is required to ensure that results are quickly available and that follow-up contacting of patients is automatically carried out. The service could be made possible by overnight incubation of cultures, more staff and a special throat service for treating patients who have been asked to return for treatment.

CHILDREN

1209. LAMONTAGNE, B. **Decentralization of decision-making to improve patient care.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. 34, 36-37.

A study of the organization and administration of patient care services at the Hospital for Sick Children, Toronto, was carried out to evaluate the factors influencing the quality of care and to recommend methods of improving the effectiveness of patient care. The system of communication within the departments had become less effective. Problems of overstaffing and control of admissions into the wards, together with the changes in nursing education, development of the women's liberation movement, composition of the patient care team, and the bureaucracy of the administration section have all led to a breakdown in communications. The attitudes of 300 nurses were surveyed, and parents' expectations for their children analysed. It was felt that the creation of patient care groups would provide closer unit patient care teams. The aims of the teams would be to: (i) shorten lines of communication; (ii) allow the incorporation of the lowest possible input into the decision making process; (iii) promote better nursing/medical/paramedical communication and promote staff morale; (iv) determine the leader of the team; and (v) create an efficient information section. The new structure would result in decentralization of departments and formation of new posts linking the professions (medical/nursing/related services). To achieve this aim some hospital committees will have to be redesigned.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 1085, 1157

1210. KANE, R. L. and others. **Is good nursing-home care feasible?** *Journal of the American Medical Association*, Chicago, 1976, Feb. 3, vol. 235, no. 5, pp. 516-519.

The reasons for the generally poor medical and nursing care found in nursing homes, include lack of interest in geriatric and psychiatric problems, low wages and poor working conditions for nursing staff. Alternative sources of care are considered and the Nursing Home Demonstration Project (NHDP) carried out in 13 intermediate level nursing homes in Salt Lake City is described. Its objectives were to set and compare the cost-effectiveness of primary care given by a nurse practitioner with that given by a nurse practitioner and social work team, and to train nursing home staff in the use of a specially designed problem-orientated record system. Patient functional and behavioural status was checked over an approximately six-month period and detailed hospital cost records were kept for each patient. Results showed: (i) the inadequacy of the medical charts previously used compared with the comprehensive and complete record system

developed; (ii) greater success in resolving social problems than medical problems; and (iii) previous patient treatment by different doctors had resulted in duplication of drug prescriptions and some pharmacological errors. The project pharmacist's review of each patient's dosage resulted in a reduction of the number of drugs given and the frequency of dosage. Combined team care is recommended. The cost of the project was found to be offset by savings realized by reduced length of stay and related medical costs.

1211. AMERICAN COLLEGE OF NURSING HOME ADMINISTRATORS. **Proceedings of the first North American Symposium on longterm care administration, Toronto, Ontario, Canada, July 27-31, 1975. Editor: Tony Talbot.** Washington, American College of Nursing Home Administrators, 1975, [x], 340pp. $6.00

This volume reproduces the 34 papers given at this symposium. They were selected from the 130 submitted on the basis of originality, application and potential contribution to the practice of administration in long-stay care facilities.

CARDIOLOGY

See Abstract No. 1203

UROLOGY

See Abstract No. 1198

SURGERY

1212. FORTIN, F. and KIROUAC, S. **A randomized controlled trial of preoperative patient education.** *International Journal of Nursing Studies*, Oxford, 1976, vol. 13, no. 1, pp. 11-24.

This paper reports a randomized controlled trial of a programme of structured pre-operative patient education preceding elective surgery at the 644-bed Sacré-Coeur of Cartierville Hospital, Montreal. The programme was planned by nurses and the teaching is done by a nurse as part of pre-admission procedures which are usually undertaken 15 to 20 days before actual admission to the hospital. The goal of the programme was to accelerate the patient's return to usual activities of daily living. The components of the programme are listed. The trial showed that: (i) such a programme can be implemented without major difficulty; and (ii) patients seem to benefit from the programme in terms of outcome measures of physical function, of comfort and of satisfaction. The implications for nurses, surgeons, the hospital and nursing research are outlined.

MATERNITY

1213. **Symposium on restructuring maternity care.** *Nursing Clinics of North America*, Philadelphia, 1975, June, vol. 10, no. 2, pp. 215-305.

Eight papers exemplifying nursing's potential in facilitating the use of new knowledge and technology are given. The various aspects covered are: the pregnancy-resolution decisions of unmarried adolescents; the effect of cost on patterns of maternity care; maternity care—an attempt to provide alternative methods involving the parents; a

consumer-oriented nurse-midwifery service based on experiences at the University of Minnesota; regionalization of perinatal care in Wisconsin; the transformation of a community hospital nursing service in Wisconsin into a regional centre; the education of the perinatal nurse clinician and the philosophy behind the training; and counselling patients with genetic abnormalities at Grady Memorial Hospital, Atlanta, Ga.

1214. HEWARD, J. A. and CLARKE, M. **Communications to an antenatal clinic.** *British Medical Journal*, London, 1976, May 15, vol. i, pp. 1202-1204.

The referral documents of 100 consecutive patients sent to an antenatal clinic were reviewed; information was collected over eight days during four weeks in November and December 1974. It was found that the referral documents fulfilled more than adequately the requirements of an introductory letter for the women attending the clinic. However, they were not always a source of the essential basic data on which the hospital record could be built and which is necessary if deaths are to be kept to a minimum. Five recommendations are offered as a solution: (i) a single booking form and co-operation card for referrals should be used; (ii) the information given should be a matter for a well-evaluated local educational programme; (iii) health care workers should encourage their patients to present early in pregnancy; (iv) practitioners should refer patients early for booking in the hospital; and (v) antenatal clinics should develop ways to reduce the waiting times for non-urgent appointments.

PSYCHIATRY

See also Abstract Nos. 1120, 1121

1215. KARLS, J. M. **Retraining hospital staff for work in community programs in California.** *Hospital & Community Psychiatry*, Washington, 1976, April, vol. 27, no. 4, pp. 263-265.

In 1972, the California Department of Mental Hygiene offered special courses for retraining those members of staff in state hospitals who might lose their jobs when the hospitals were closed. Opportunities were offered in prisons, other hospitals or community mental health centres. The courses were conducted by the Centers for Training in Community Psychiatry in Berkeley and Los Angeles. The establishment of the Los Angeles course is outlined. Seventy-six per cent of the participants were women, and the average age was 42.3 years with one year of college experience. The findings revealed that while participants considered the course valuable, most decided to return to the state hospital instead of taking the jobs they had been offered in the community mental health centres. The major reason appeared to be the lower salaries and the unwillingness of the staff to change their job unless they had to. Those who did accept community jobs tended to be younger, better educated with fewer years of experience in the state hospital service. A shortened form of the course is now given in collaboration with hospital training officers as in-service training for all.

1216. MCKERROW, L. W. **The dilemma of psychiatric hospitals: patients' rights vs. public safety.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, March, vol. 18, no. 3, pp. 67-68.

The greatest problem facing the psychiatric hospital in Canada arises from the conflicting aims of increased civil rights of patients and the expectation of the com-

munity for the hospital to safeguard society from difficult and dangerous people. The problems are exacerbated when a patient commits suicide either in a psychiatric hospital, or shortly after leaving the institution. Modern psychiatric hospitals work on the 'open door' concept, granting privileges to patients on a trust system. It is very difficult to forcibly detain patients in a psychiatric hospital. Patients enter hospitals in two ways: (i) by their own volition; and (ii) under civil commitment. Informal patients have no legal ties on their freedom; involuntary patients can be brought back by the police. However, there is increasing concern about the confusion between the roles of psychiatry and the law, since legal authorities do not want to process a case in which there may be a psychiatric condition, and yet the psychiatric treatment of those people committing crimes is complicated by their criminal and often difficult behaviour. There is a need for a greater definition of the role of the psychiatric hospital, and until this takes place the relative roles of the law and the hospital will be determined on a case to case basis which may be quite inconsistent.

1217. HIRSCH, J. **A new organization for the psychiatric service in Oslo.** *Journal of the Oslo City Hospitals*, Oslo, 1976, April, vol. 26, no. 4, pp. 41-44.

Following a report by a committee, the somewhat piecemeal nature of psychiatric services in Oslo is to be replaced by a new organization. The service is to be controlled by two advisory and co-ordinating committees. The city will be divided into 13 primary districts each with 40,000 to 50,000 inhabitants. In each district one institution for child and adolescent and one for adult patients will have general responsibility for decisions on out- or in-patient psychiatric treatment or referral to general practitioner, social welfare or other type of community service. Each district will also have a local contact-committee representing all services to work out preventive programmes such as day care for children, groups for single mothers, youth club and activities for the ageing. To ensure comprehensive inter-district service, the primary districts will be combined into four secondary districts, dealing with hospital care of adult psychiatric patients and city wide care of children and adolescents. Continuing problems of staff training and community/hospital care are discussed. It is however felt that under the new system the psychiatric services will operate nearer to the patients, their families and their social networks.

1218. EASON, R. J. and GRIMES, J. A. **In-patient care of the mentally ill: a statistical study of future provision.** *Health Trends*, London, 1976, May, vol. 8, no. 2, pp. 13-18.

This paper examines the use of in-patient beds in recent years in a way that enables comparisons to be made with the recommended levels of provision in the future community based services and assessments to be made of probable developments. It also describes some of the work being undertaken in the Department of Health and Social Security on psychiatric in-patient statistics. The conclusions drawn are: (i) for adult acute patients, the recommended level of 50 beds per 100,000 population seems to be adequate for the start of the next decade as long as other groups are catered for; (ii) for children and adolescents, the special units should provide adequate provision; (iii) for the elderly severely mentally infirm, post-assessment provision is thought to be necessary for about 2.5 patients per 1,000 population aged 65 and over, although this may increase; (iv) for the 'old' or existing long-stay population and the elderly severely mentally infirm, the number of beds required is likely to reduce steadily by about nine

per cent per annum; and (v) for the 'new' long-stay currently being accumulated, the estimated provision necessary is about 3.3 occupied beds for 100,000 population in 1981.

1219. HOLAHAN, C. J. **Environmental change in a psychiatric setting: a social systems analysis.** *Human Relations*, London, 1976, Feb., vol. 29, no. 2, pp. 153-166.

Extensive physical remodelling of a psychiatric admissions ward in a municipal hospital provided an opportunity to study the relationship between ward physical environment and patient behaviour. The introduction of bright colours on the walls, creation of ward areas, and the addition of new furniture produced a range of social participation. An analysis of the changes in the ward social system, including staff role relationships, distribution of power and communication methods is outlined. Changes occurred in four phases: petrification, unfreezing, resistance and personalization. The psychological issues underlying the change of the environment into the ward social system are discussed. Comparisons are drawn between interventions created by altering the environment and those created by altering the organization.

1220. SHARFSTEIN, S. S. and NAFZIGER, J. C. **Community care: costs and benefits for a chronic patient.** *Hospital & Community Psychiatry*, Washington, 1976, March, vol. 27, no. 3, pp. 170-173.

The costs and benefits of keeping a middle-aged chronically ill patient at home with her family were analysed. The patient received care from a neighbouring health care centre after having been in hospital for eight years. Comparative costs of care over a three-year period were made between a community mental health centre, the neighbourhood health centre and a state hospital. The cost of care in the neighbourhood centre fell from $2,110 in the first year to $640 in the third year, whilst the costs of care in the alternative settings rose substantially. The consequences of the patient's stay in the community revealed that considerable savings were made by the social services who no longer provided home help services, and the mental condition of the patient greatly improved. The benefits of community care far outweigh the costs in both financial and human terms.

1221. MURPHY, J. G. and DATEL, W. E. **A cost-benefit analysis of community versus institutional living.** *Hospital & Community Psychiatry*, Washington, 1976, March, vol. 27, no. 3, pp. 165-170.

The Commonwealth of Virginia has developed a methodology for conducting a cost-benefit analysis of institutional versus community living. The methodology was used to project costs and benefits over a 10-year period for 52 patients who had been successfully placed in the community by the Service Integration for Deinstitutionalization (SID). The results showed a gain of $20,800 for the 52 patients. The methodology used is outlined, the cost and benefit elements considered and adjustments made for economic factors that could not be measured directly. The benefits accruing to state funding sources far exceed those accruing to federal funding sources. However, a larger sample size, including patients from other regions, would have increased the authenticity of the findings. The length of stay in the community should have a longer follow-up in order that observations not projections can be used in the analysis. No assessment of the sensitivity of the information to inflation or deflation was made, and maintenance and support services were not separated sufficiently.

1222. PHILIP, A. E., MCKECHNIE, A. A. and HEGGIE, B. A. **Bed usage as an index of the work of a psychiatric hospital.** *Health Bulletin*, Edinburgh, 1976, May, vol. 34, no. 3, pp. 159-162.

A survey was carried out in the 918-bed Bangour Village Hospital to determine whether national statistics including sub-classification of psychiatric beds might be of greater validity than those at present issued. Changes in the hospital's catchment area, total number of in-patients and the proportion of geriatric patients (changing from two-thirds under 65 years in 1963 to one half 65 and over by 1973) led to the identification of six patient groups; (i) acutely ill, non-geriatric; (ii) acute and chronic psychogeriatric from West Lothian; (iii) chronic geriatric from North Edinburgh; (iv) patients in rehabilitation and resocialization programmes; (v) chronically ill, long-stay 'graduate' patients of all ages; and (vi) young adolescents. Application of the bed use data factors (staffed beds available, admissions, discharges, deaths, daily average occupancy, average length of stay and turnover interval between emptying of a bed and its occupancy by a new patient) showed the differences in functioning of the six units, a feature not shown in the national statistics which record only bed use for the hospital as a whole. The possible use of a simple method of categorizing units; and hence beds, by age and chronicity is also recommended for short-term studies. The authors agree on the proven greater validity of the type of statistics described, also on the encouragement given to hospitals to study more closely the characteristics of their patient populations and the help provided in assessing the needs of psychiatric hospitals taking into account both local and national considerations.

1223. BAKER, A. A., editor. **Comprehensive psychiatric care.** Oxford, Blackwell, 1976, x, 294pp. £6.75

This book describes current concepts of care and treatment of psychiatric patients, with particular reference to their multidisciplinary character. There are chapters on nursing, the contribution of the remedial professions, social work, the role of the administrator, clinical psychology, general practice, the consultant's role, psychiatric care of children and adolescents, care of the mentally handicapped and mental illness in the elderly.

1224. FRASER, D. and others. **Against the odds: the results of a token economy programme with long-term psychiatric patients.** *International Journal of Nursing Studies*, Oxford, 1976, vol. 13, no. 1, pp. 55-63.

A token economy system was introduced for seven patients in a locked ward housing a total of 17 patients at Sunnyside Royal Hospital, Montrose, Angus. The three main stages in the establishment of the scheme were: (i) behaviours necessary for effective day-to-day functioning were specified; (ii) a unit of exchange was established, i.e. a plastic disc or token; and (iii) the tokens were made exchangeable for a variety of items which the patients already liked, e.g. sweets, cigarettes, lemonade, etc. Over a nine-month period, the token economy group showed a significant improvement in social withdrawal; socially embarassing behaviour and symptoms remained unchanged in both groups.

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